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STUDIES IN THE SOCIAL  
SIGNIFICANCE OF ADULT EDUCATION  
IN THE UNITED STATES

*A series of studies, about forty in number,  
to be issued over a five-year period by the  
American Association for Adult Education*

PUBLISHED

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# LISTEN AND LEARN

FIFTEEN YEARS OF ADULT EDUCATION ON THE AIR

BY FRANK ERNEST HILL

AMERICAN ASSOCIATION FOR ADULT EDUCATION

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## Foreword

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THIS volume is more reportorial than scholarly. It is the product of an effort to collect and relate to one another the important facts about adult education by radio, past and present. I have had a limited time for this effort. Therefore I have attempted no research (although seeking to take account of that done by others), and have confined myself to reading, observing, interviewing, and listening to broadcasts. In the course of these activities I have spent several months in visiting radio stations in various parts of the country, from New York to Los Angeles, and have heard many hundreds of their programs. I have talked both with station and network officials, and with a large number of engineers, educators, and representatives of educational groups.

Nevertheless, the work has been of necessity selective. The American broadcasting activity is extensive and complex, and to attempt anything like a thorough investigation of it would mean a labor of years. I have been forced to make choices as to what stations and groups might be most significant, and in consequence have missed seeing many important stations and radio workers. Yet what I have found has been great both in amount and variety, and I trust it is fairly representative of what I did not see.

Educational broadcasting has had its contentious aspects. I have had no wish to revive or promote controversies which have already been regrettably numerous and bitter. Consequently, in quoting opinions expressed to me personally (and often with a stipulation not to reveal the source) I have given few names. However, no statements or incidents reported in these pages are synthetic or imaginary. All represent actual utterances or happenings, the truth of which I can substantiate. I have used such material freely because I believe that readers interested in educational broadcasting will profit by a frank setting forth of the words and actions of responsible workers in the field, while for the thousands of educators and broadcasters engaged in the actual work the benefit may be even greater.

To list the many persons who have given me assistance in discussing problems, collecting materials, examining stations and records, and watching rehearsals and broadcasts would require several pages. Members of the Federal Communications Commission, network officials, engineers, individual station managers, school superintendents and teachers, college teachers and executives, and officers of foundations and associations have all been cordially helpful. In particular, Morse A. Cartwright, Director of the American Association for Adult Education, has been generous in affording exceptional facilities for prosecuting a difficult study. Members of the Association staff have been diligently helpful, especially Harriet Van Wyck and Dorothy Rowden, who have assisted in the collection of data and the preparation of the book for the press, respectively. To Levering Tyson of the National Advisory Council for Radio in Education I am indebted for much information, both by interview and in the form of material from his files. I am appreciative also of his

permission to use as a title for the book "Listen and Learn," which has appeared as a "slogan" in the publications of his organization. Franklin G. Dunham of the National Broadcasting Company, Frank N. Stanton and Frederic A. Willis of the Columbia Broadcasting System, S. Howard Evans of the National Committee on Education by Radio, William D. Boutwell of the United States Office of Education, S. E. Frost, Jr., and Kenneth Bartlett of Syracuse University have all given me an exceptional amount of assistance. I desire to thank here these men and women whom I have specifically named, and the hundreds of others whom I have not named, for their generous aid.

FRANK ERNEST HILL





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## Invisible Classroom

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ONLY with the tools and prevision of modern science would the vast stadium have been possible. Indeed, it seemed more a fact of nature than a product of human will—a Grand Canyon laid upon the landscape in monstrous coils or one of the craters of the moon reduced to geometric precision. From the central bowl one could gaze seven miles in any direction and see the concrete tiers gradually rising until the height of their masses was subdued by distance. “Seven times the area of Manhattan Island,” smiled the Chief Engineer. “But for that number of people assembled in one spot the space is necessary. Simple arithmetic will tell you that.”

Of course the stadium was never built. Perhaps even modern engineering could not have created it; and, were the job possible, a world madder than ours would have rejected it as a monstrosity. But to make the picture imaginatively is to get a fantastic sense of the audience that might assemble any night if all the users of radio in America were to gather in one spot to hear a broadcast.

For within the borders of the United States are now 24,500,000 radio sets, each representing an American family. Duplicate sets and sets in motor vehicles lift the full number to more than 33,000,000. A modest estimate would put the potential radio audience of the land at almost ninety million.

It is true that the ninety million lack totally a physical unity. They are invisible. No speaker or singer can see them. As individuals they have almost no awareness of one another. A group in a grocery store in Tallahassee or Kankakee, a few patrons leaning on the bar of a hotel in Milwaukee, a family chatting in a Pittsburgh living room, the sick lifting alert eyes from white faces in hospital beds, a motorist passing the long hours on a Nebraska highway—such scattered atoms are never physically assembled. Nor among the several hundred thousand programs broadcast yearly (the National Broadcasting Company networks alone produce 51,000) do the ninety million listeners ever find one which makes them a unit, and seldom anything that attracts a clear majority. Jack Benny or Amos 'n' Andy may bind a respectable fraction for thirty minutes; Walter Damrosch is said to gather ten million children and adults for his weekly Music Appreciation Hour. It is doubtful if fifty million have listened to one of President Roosevelt's fireside chats or to Edward Windsor's renunciation of a crown.

Yet compared with anything known before an infant broadcasting industry spoke its first halting words seventeen years ago, even a modest radio audience represents an overwhelming phenomenon. Never before could a speaker or singer send his voice directly to more than a few thousand. The multiplication of listeners into hundreds of thousands and millions is fully recognized now as one of the greatest of those changes in human habits and powers which give the Machine Age its character. But the actuality is difficult to grasp. Some such fantastic symbol as our imaginary stadium with its fifteen square miles of seats is necessary to make comprehensible the wizardry which can summon an audience that never physically assembles but, bound by

the psychic fact of attention, offers a means of communication between men, the power of which would have paralyzed the understanding of a Bacon or Da Vinci.

The announcer steps to his microphone and sends his voice outward upon the air. It goes into the vast hall of space, perhaps to serve a manufacturer of soap or carbonated water, perhaps to bring a political leader and his ideas to an unseen constituency, perhaps to introduce a renowned actor or singer to the listening millions.

But the teacher can use the microphone also. The hall of space may become an invisible classroom, by far the greatest—if also the least calculable—that has ever been known. And the possible results are as dynamic for education as for any salesman, actor, or statesman.

They are dynamic for teachers in schools training young Americans, but they affect even more the growing group of educators busy with the training of American adults. Indeed, of the American population from three fifths to two thirds have finished their formal schooling; and in hours spent with radio this great group probably represents three quarters of all listeners. Most of these sixty to eighty million men and women need, and many want, more education. On the average they have had a scant eight years of schooling. Within the last fifteen years the problem of how to find them and train them further has become one of the greatest which adult educators face. In radio exists an agency for reaching them not by the hundred or thousand, but by the million!

The mass of educators have not recognized the importance and power of this new instrument. Many are still indifferent to it or regard it with contempt. But from the beginning a small

group of men and women perceived the potential importance of broadcasting in education. Their number has grown, and a dozen years of experimentation have already given education by radio a history. Moreover, it is clear that as time passes this activity will seem less than a vestibule to accomplishments that must make a towering edifice. Or perhaps it would be more realistic to say that radio is now an outland of education, with all the half-accomplishments and uncertainties that mark a still scantily developed region.

Let us enter this new country and observe it. It is no tamed realm of placid graphs and organized processes, of confident teachers and ordered groups of students. These may come later. But today a quiet educator entering for the first time this world of radio will be alarmed by its unacademic atmosphere. Brisk technicians will elbow him out of the way. He will be aware of politicians and high financiers shrewdly watchful in the background. He will hear men shouting conflicting purposes, fantastic hopes, bitter disillusion. He will think it a place where an innocent bystander might be hit by a flying missile (as sometimes he is). And in the midst of this unacademic activity he will see a variety of people contemptuously or bewilderedly or passionately carrying on whirlwind educational experiments and stopping occasionally to argue, barter, or struggle with one another!

We can not predict what will happen to education in this violent frontier-region. Those who sow learning upon the air may find their intangible acres as bitterly disappointing as an earth that is sour or stony or whose too hastily cultivated soil is whirled away in dust. But, again, it may prove a kind of promised land of science and art that will yield fabulously as we learn to use it.

Our ignorance is the surest fact about this area at the outer reaches of education.

An attempt to sketch the history of education by radio and examine its present character may tell us more than we seem to know. There are fifteen years of activity to look at—enough to give us a perspective. And if this longer view reveals little order, it will at least make more apparent the character of the disorder which exists and with each day is the more our need to master.



## The Name of Education

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WHENEVER a group of educators and commercial broadcasters assemble to discuss their common problems," recently remarked a government official active in radio, "one of the broadcasters tosses a golden apple into the gathering. It is an apple called 'What is educational broadcasting?' Immediately all the educators begin to scramble and quarrel over this fascinating object, and the broadcasters lean back in their chairs with the assurance that for the remainder of the session no embarrassing questions will be asked them."

This parable suggests a difficulty which soon intrudes itself upon the attention of anyone surveying the educational activities of radio. At first glance there is something ludicrous about it. Surely an educator knows what education is!

But no one working with radio regards the matter as ludicrous. Educators find it perplexing, and for many broadcasters the demand for a definition is no red herring dragged across the path of progress with a malevolent slyness. Not long ago I heard an earnest official from a broadcasting station plead with a group of teachers and educational executives. "Tell us what education by radio is," he begged. "We don't know. But if you will tell us, we will cooperate with you in bringing it to the public. Our resources are at your disposal, only—tell us what education is!"

In the silence that followed his words no educator arose to give an answer.

Accordingly, we who are examining education by radio may pause to ask exactly what it is that we are going to look at and talk about. The question is really not so difficult as it seems to be. We shall find it simpler as we clear away certain confusing misconceptions which have hampered most discussions of the problem.

First of all, we should recognize the character of education in general. At root it is a subjective activity, like painting or poetry, and hence susceptible to measurement only to a limited degree. Definitions have been made for poetry, but the most famous of these shows the limitations of describing a process partly intellectual and imaginative. Matthew Arnold's assurance that poetry is "a criticism of life under the conditions fixed by the laws of poetic truth and beauty" does not greatly help the puzzled beginner to find his way about in the art of Homer, Shakespeare, and Whitman. And so with education. By philological derivation it is a "leading forth," a conditioning or training for the processes of life. But obviously the question of what this training should comprise may be answered in innumerable ways and has so been answered. Men dispute from age to age as to what education is and is not. They are little surer of what it should be in the schools than of what it should be on the radio. Accordingly, we should not expect a precise answer as to what educational broadcasting should be but rather a suggestive one.

Again, we should dispel a confusion surrounding the practical use of the word—a use which involves a double meaning. If education is a conditioning of an individual, obviously all that happens to him is education in the larger sense. And when this

is applied to radio, everything that is heard, from syncopated music to the announcer's praise of toothpastes or motor cars, is educational. But plainly such an inclusive definition merely evades the question. One must distinguish between the haphazard play of influences upon an individual and purposeful efforts to train him. It is with the latter that we are concerned.

Numerous attempts have been made to define this specific process as it is used in radio. W. W. Charters of Ohio State University has termed an educational broadcast "one which raises standards of taste, increases the range of valuable information, or stimulates audiences to undertake worth-while activities. In short, an educational program is one which improves the listener."

As S. E. Frost, Jr., points out in *Is American Radio Democratic?*<sup>1</sup> the chief difficulty here is the subjective character of the terms "taste," "valuable," "worth-while," and "improves." With these accepted, educational broadcasting will vary with every listener. Mr. Frost seeks to avoid this chameleon terminology by examining the needs of the modern individual in his social setting. He finds educational broadcasting to be an activity which builds "self-directive intelligence." In the setting of his careful study of radio and American society Mr. Frost's definition gives a tangible conception of education by radio.

For the reader who wants a short cut, C. F. Klinefelter of the United States Office of Education has gone far toward giving educational broadcasting a character.<sup>2</sup> He defines it in terms of procedures. He lists three: the informing procedure, the teaching procedure, and the thinking procedure. A broadcast is edu-

<sup>1</sup> University of Chicago Press, 1937.

<sup>2</sup> "What is Educational Broadcasting?" *School Life*, Vol. XXII, No. 7.

cation as it gives information which a society regards as "socially desirable," if it "discusses items of knowledge and gives clear-cut directions for their practical application," if it gives a "step-by-step explanation of how to do or make a certain thing," if it presents "a problem involving the exercise of judgment or constructive thinking in such a way as to bring out, in an impartial and dispassionate manner, all the various factors involved in the problem so that listeners are stimulated to make an intelligent evaluation and arrive at a logical conclusion."

The foregoing definitions carry us toward an accurate sense of what we are dealing with. But some further considerations may make its nature even clearer.

First of all, common sense indicates that the auspices under which a program appears on the air do not make it educational or non-educational. The character of the program itself is what counts. Thus a college can put on a program that is non-educational (although this has seriously been declared by some confused commentators to be impossible!), and a department store or a manufacturer can produce one that is entirely educational. The Standard Oil Company does just that in California.

Again, the *purpose* of an educational program need not be educational, although almost invariably it is. If the program educates or stimulates its listeners to get education, even though this was not the intent of its producers, it is none the less educative. The Metropolitan Opera is entertainment, yet the music and singing and commentary can be and are educational exhibits for most listeners. In this connection we may note the character in contrast with the effect of a broadcast. As we shall see later, the effect is difficult to determine. But so is the effect of a lecture in a classroom. The chief test is the nature of what is

done. If the character can be checked by results, so much the better. But if it can not be (as is often the case), we are thrown back upon the lecture (or, in radio, the broadcast) itself. If this is clearly calculated to educate, the program is educational.

Finally, it must be remembered that education can be good or bad, successful or unsuccessful. We accept it as education when it functions as education. We are free beyond that, of course, to have our opinion of its value. But this opinion does not change the functional character of what has been done. We may listen to a dull lecture on physics. It may be so dull that we regard it as worse than no education at all, yet in intention and execution it may be unmistakably educative. Again, a course in business methods may be thoroughly distasteful to most educators (especially if it follows actual practice in certain fields), and a course in strikes and labor relations may be similarly repugnant to others. But both could meet with widespread disapproval and yet unquestionably give educational training.

We may then define education by radio as a process of training which happens to use radio apparatus as an agency. We may say that usually it has the *purpose* of training the listener, but if the purpose is not present the *fact* of training must be clear. We may recognize this training as a conveying of information or the giving of informing exhibits (as of music or poetry or the pronunciation of foreign languages), as a teaching of skills (as when and how to spray trees or how to make a family budget), as the promotion of understanding (as of public events or a psychological situation), or as the encouragement and facilitation of a capacity to analyze or to build a constructive chain of thought.

As we examine radio at work, we shall see this definition embodied in actual programs. However, to avoid confusion let us

match the definition in a preliminary way against certain known radio offerings.

Personally, I have found its application easier by regarding radio programs of an educational character as falling into two classes. One is the class of programs unquestionably educational. The other is that class with some educational content but with other aspects which give programs a less definite character. Let us call the two types educational and semi-educational respectively.

Among the educational programs would fall those dealing with biography, such as the University Broadcasting Council's Titans of Science and its sequel, Men of Destiny, produced by WGN in Chicago; and Meredith Page's Men Who Made America, produced by WLW in Cincinnati and later over an N.B.C. network. So also would programs giving political, economic, and sociological information and discussion, like the Chicago Round Table (N.B.C. and University Broadcasting Council), America's Town Meeting of the Air (N.B.C.), and the Office of Education's Let Freedom Ring (C.B.S.); and programs giving scientific and sociological information, like The World is Yours, and Have You Heard? (both of which are prepared by the Office of Education and produced by N.B.C.), and Science Service (C.B.S.). Educational programs would include those dealing with literature, like Treasures Next Door (Office of Education and C.B.S.), Living Dramas of the Bible (C.B.S.), The New Poetry Hour (WOR), and a number of the experimental programs of the Columbia Workshop, some, like Archibald MacLeish's The Fall of the City, literature in themselves, and others, dramatizations of literature.

The musical teaching programs like the Maddy Band Les-

sons and the Damrosch Music Appreciation Hour, both N.B.C. "features," would be educational. So would dozens of musical appreciation programs like the Metropolitan Opera broadcasts (N.B.C.), the excellent recordings and "live" broadcasts of fine music produced by station WQXR of New York, the Mutual programs coming from WOR, like Sinfonietta and Music and You, and broadcasts of symphonic music like those sponsored by the Ford and General Motors companies. Programs dealing directly with personal conduct would be educational: examples would be the excellent forum, Raising Your Parents, developed by N.B.C., programs of the National Congress of Parents and Teachers, and the more emotionalized The Voice of Experience (N.B.C.). The school broadcasts would be educational—for instance, general supplementary programs like those of the American School of the Air (C.B.S.), the Wisconsin School of the Air (by the state-owned station WHA), and the Ohio School of the Air (developed under the Ohio Department of Education and broadcast over the college station WOSU and the commercial station WLW in Cincinnati). The actual lessons broadcast from commercial stations in such cities as Cleveland, Rochester, and Indianapolis would also be classed as educational. Language lessons would be included; so would programs with information about health and medicine, such as the American Medical Association has developed and many city and state departments of health have broadcast. Agricultural programs discussing farm problems and farm information, like the National Farm and Home Hour, would have an educational character (entertainment usually forms a part of these but is subsidiary to information). Programs giving domestic science instruction, the better-speech programs, spelling bees, and some programs of

general information like the Office of Education's Answer Me This would be educational. Such programs as those giving information about educational opportunities (there are some excellent programs of this type broadcast from libraries and museums) and programs on vocational guidance (the educational station WOI at Ames, Iowa, broadcast a series on this subject in 1937, and the National Advisory Council on Radio in Education developed such a program) are also educational.

I should not regard news broadcasts as more than semi-educational. The information they contain is often useful, but it is miscellaneous, and the programs do not train directly either in purpose or effect. Most of the quiz programs, where the material is heterogeneous and often haphazard, would fall within this class. So would WOR's interesting program, The Hobby Lobby, for entertainment and information almost equally divide the material. Programs like that of Cheerio, with a mixture of material, some of it informational or calculated to develop literary appreciation, can be called semi-educational. So can Alexander Woollcott's The Town Crier. Dramatized stories like Betty and Bob, partially concerned with problems of conduct, seem to me to fail even of this partially educational character. They are essentially entertainment. Some health and household hints programs fall within the same class. Each listener may make his own judgment about them, and there will be little significance in whatever he decides!

From the foregoing we can have a clear if somewhat superficial idea of what we are looking for as we explore education by radio. It should be added that when all the definitions have been made, we shall have to summon a certain amount of common sense in applying them. Interpreters of education by radio have



in the past often been the victims of their own intellectual gymnastics. When he was president of N.B.C., M. H. Aylesworth once called Amos 'n' Andy educational because it dealt with problems of conduct. The obvious truth is that no one would have thought of this amusing program as occupying the role of teacher if he had not carried interpretation into phantasy. For the theorist who insists on hypnotizing himself into such a mental state, I know of no medicine. But one who keeps a sense of reality and proportion can identify education in the broadcasting world as readily as he can in the schoolroom. That is as much as he should expect.

## Hercules Breaks His Cradle

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WHEN a grave young Italian with a severe blond mustache startled London in February, 1897, by sending code signals without wires between points many miles apart, there was no thought that "wireless" would have any more significance for education than the telegraph or telephone. Its faintly heard dots and dashes were a miracle, but they conjured up no images of the lecturers, the bursts of opera, or the finished drama which are a casual part of broadcasting today. Marconi himself thought only in terms of signals. He was cautious even with regard to those. "I am uncertain as to the final results of my system," he said. "I have no idea whether or not it will ever be able to carry a message across the Atlantic." But he added with quiet confidence, "For land purposes it will be a complete success within a comparatively short time."

Yet the new magic which Marconi had brought to birth already had its relationship to education, and this relationship was to expand steadily and culminate in a kind of creative explosion which would amaze men and women everywhere. Marconi had not "invented" wireless in any complete sense. He had been less a father to it than an obstetrician. As he put it himself, "My discovery was not the result of long hours and logical thought but of experiments with machines invented by other

men to which I applied certain improvements." And among the many pioneers like Hertz, Branly, and Righi who had preceded him in finding and studying sound-bearing waves, were a number of teachers and research workers at universities.

Such men, with Duddell, Poulsen, Fessenden, and De Forest, increased the sensitivity of radio machinery so that it would not only register taps of sound but also the more complicated variations necessary to reproduce music and the human voice. And from the year of Marconi's first successful tests, universities in the United States busily kept pace with experiments or carried on pioneering of their own. In 1897, a student at Tulane successfully repeated Marconi's accomplishments. Wittenberg, Ohio State, Arkansas, Nebraska, Minnesota, Wisconsin, and many others soon established radio laboratories. Fessenden broadcast a program as early as December 24, 1906, two years later than Poulsen's first demonstration of wireless telephony, and the University of Wisconsin was sending music over the air in 1917, not long after De Forest's impressive demonstration with the election returns of 1916.

The students in physics and electrical laboratories were quick to grasp the potentialities of broadcasting for education. C. M. Jansky, Jr., now one of the most notable of radio engineers in the commercial field, told, in 1933, how as a university instructor he heard a broadcast at the University of Wisconsin in May, 1919, from a station several hundreds of miles distant. "For the first time I had heard speech and music transmitted and received without the aid of wires," he said. "Here was a medium of communication the principal characteristics of which were simultaneous and instantaneous dissemination of sound-carrying waves in all directions from a common point. It was but natural

to reason from this that radio telephony would be ideally suited to the simultaneous dissemination from one station to many receiving sets of weather information, market reports, news, etc. . . . Furthermore, being at the time a member of the faculty of an educational institution, it was also natural that I should feel that in the development of broadcasting certain to come, the educational institutions of this country should play a very important part. This to me at that time seemed a logical deduction."<sup>1</sup>

Such a vision of educational possibilities through radio was common to many university men in the scientific departments although their humanistic colleagues and the heads of their institutions were not to see it for years to come. The first of the experimental radio licenses was issued to St. Joseph's College in Philadelphia in 1912 under the Radio Act of that year, the first Federal legislation for the control of radio activities outside the marine services. And while the first broadcasting license went to Station WBZ (now WBZA) at Springfield, Massachusetts, on September 15, 1921, a license was issued in 1921, undated as to month or day, to a college—the Latter Day Saints' University of Salt Lake City, Utah; and on January 13, 1922, the universities of Minnesota and Wisconsin both received official status as broadcasters.<sup>2</sup> Before the end of that year seventy-three educational institutions had been licensed. This sudden activity—paralleled by an upsurge of commercial stations—was due in part to the broadcast of the 1920 election returns by the Westinghouse Station KDKA at Pittsburgh on November 2. To get an

<sup>1</sup> *The Problem of the Institutionally Owned Station*, by C. M. Jansky, Jr. Privately printed, 1933, pp. 213-14.

<sup>2</sup> *Education's Own Stations*, by S. E. Frost, Jr. University of Chicago Press. 1937.

audience for its broadcast, KDKA (which was operating under an experimental license issued October 27, 1920) had distributed a number of free radio sets and created an audience. But from the time of this demonstration listeners multiplied daily. And the colleges of the land were doing their part in furnishing service. They had been quick to push into this new field of applied science where miracles were daily occurring.

The excitement and confusion in broadcasting during this period is impossible to exaggerate. The new activity was an infant Hercules who had not only strangled a few dozen menacing serpents but was in the process of breaking the very cradle in which he had been laid. This was only natural considering the furious pace of development that had been set with the conclusion of the World War. Official regulation could not keep up with a frenzy of growth and experiment which permeated all radio activities at the time.

Knowledge of what we now call the radio spectrum was fragmentary. It was known, of course, that sound-carrying waves varied in length and that the longer waves made fewer oscillations per second. These longer waves, running from frequencies of 1,000 to 1,500,000 cycles per second (or from one to 1,500 kilocycles [kc.]), were known and used. Ships and airplanes used the lower frequencies—up to 500, and broadcasters were experimenting with the ones above this. But the imaginary ladder on which we now hang frequencies, controlling them to within ten kilocycles of one another, a ladder which extends from impulses which come at the rate of one kilocycle per second to those which vibrate at the rate of 100,000 or more, with broadcasting definitely assigned to the span from 550 to 1,600, was then undeveloped. We are, of course, still experimenting with “short waves” or higher frequencies. In 1922 the Department of Com-

merce, which had administered radio activities since its formation in 1913, had authorized two frequencies for wireless telephony, one at 833 kc. for news, concerts, lectures, and so forth, another at 618 kc. for crop reports and weather forecasts. This allotment seems appalling today, but keeping a station on a steady frequency was then impossible nor was the placing of all broadcasters on two frequencies so fantastic as it now appears. When the arrangement was suggested in 1921 there were in the first place only a few telephonic stations. Again, most of these up to 1923 were of less than a hundred watts in power, many only of one or five watts. They could be heard only for short distances, and there seemed little chance of interference. Besides, the whole broadcasting activity was experimental.

But with 1922 the stations increased almost daily until they ran into the hundreds. Also, they were steadily augmenting their power. And not only was the arrangement for distribution becoming utterly impossible—there was also no provision of any kind for the future system which obviously would now develop. Who should control broadcasting? What should be permitted on the air and what forbidden? What should be the regulations governing mechanical equipment? Such questions and others looked toward additional legislation, but meanwhile even more immediate action seemed necessary. Herbert Hoover, Secretary of Commerce in 1922, was doubtful as to what powers the Radio Act of 1912 gave him over an activity which had been practically nonexistent when the Act was framed. But it was certain that he had whatever authority existed. He decided that for the time he would assume power to do what seemed necessary. Meanwhile, he summoned all those involved in the new industry to consultation and cooperation with him.

They gathered for a conference at Washington on August 8,

1922. Secretary Hoover had invited broadcasters, representatives of the radio manufacturing interests, inventors, eminent scientists, heads of foundations, educators, and delegates from the Army, Navy, and Marine Corps. This was to be the first of four conferences through which the character of broadcasting in the United States would be determined, with important consequences for education in particular as well as for the country as a whole.

It is the testimony of men who attended these conferences that the proceedings were characterized by a sense of the importance of what was to be done and of the high responsibility in the hands of the delegates. In radio the conference members saw an instrument with amazing potentialities. "We perceived," said one of them recently to the writer, "that what might be decided at these meetings would probably be enacted into law. It would affect the national life, for good or ill. We tried to consider every aspect of broadcasting—mechanical, legal, political, psychological." Chairman Hoover and the members seemed to have among them the capacity for their task. Hoover, with his Belgian and Food Administration laurels yet green, and a Presidential star apparent to some on the distant horizon; Owen D. Young, with a reputation for liberal economic thought and international experience; Michael Pupin, with an eminent scientific background—such men seemed qualified to guide American radio.

There is every evidence that education was frequently considered at this and the following conferences, and in a more than friendly manner. Levering Tyson of the National Advisory Council on Radio in Education has constantly asserted this to be the fact. C. M. Jansky, Jr., in 1933 reported that his notes showed the conference of 1922 to have regarded broadcasting as

likely to fall into four categories: (1) government, i.e. by Federal departments; (2) public, by universities and other public institutions; (3) private, broadcasting without charge by newspapers or stores; and (4) toll broadcasting. The last was to be charged for and showed that the conference envisaged a future for advertising by radio.<sup>8</sup>

Undoubtedly, events helped somewhat to shape the course of the conferences. Radio sets were multiplying in number. Chairman Hoover told the public in 1922, some months before the conference, that 600,000 families were listening to programs where only 50,000 had listened a year earlier. In March, 1923, he estimated the radio sets at between 1,500,000 and 2,500,000. The number of stations had risen with the listeners—there were seven hundred and fifty of them. Through the conferences, efforts were made to regulate by “gentlemen’s agreement” the frequencies at which various stations could broadcast, although anything like the present system of definite allocations was not recommended until 1924. Meanwhile, with the growth of the radio audience, the possibility of advertising had become an actuality. How to pay for programs had remained an unsolved problem until almost 1923, although not a serious one, for radio listeners were so enthusiastic about the marvelous toys they possessed that they were willing to listen to anything from phonograph records to the poorest of amateur speakers or singers.

So far as is known, the first commercial broadcast made was a ten-minute talk over Station WEAJ under the auspices of the Queensborough Corporation, promoters of the Jackson Heights development, Long Island. This program began September 2,

<sup>8</sup> Jansky, *op. cit.*, p. 216.



1922, and was carried once a week through September, 1928. In December, 1922, the William H. Rankin Company, an advertising agency, began to use the radio. Mr. Rankin soon persuaded a client, a cosmetic firm, to try the new medium, and the screen actress, Marion Davies, read a talk. She offered a free picture of herself to all who would write, and an avalanche of 10,000 letters descended upon the bewildered sponsor. Not long afterward a Broadway play, *Wildflower*, almost at the point of failure, was publicized by radio and became a hit. The efficacy of advertising by radio had been established.

Doubtless such events had an effect upon the conference members. Indirectly they made a strong practical case for the private management of radio. But the temper of the American people in 1924 was individualistic, as was the temper of most of the delegates. There was a practically unanimous feeling that the government's part in radio should be a supervisory one.

Nevertheless, under the guidance of Hoover the public character of the radio enterprise was recognized. His declaration at the third conference stamped radio as an activity affected by the public interest: "The government, and therefore the people, have today the control of the channels through the ether." But the fourth conference, while affirming its belief in this doctrine, declared that the stations should not represent a public utility but private licensees of facilities to be used for the public benefit, the licenses to be held only while they served the public adequately.

The conference recommended also that there should be no monopoly of radio communication, that it should operate under government supervision (by the Department of Commerce),

and that the Secretary of Commerce should classify stations, fix name-letters, power, location, time of operation, wave length, character of "emission," and the duration of license.

Hoover had enunciated another principle at the third conference which was also adopted at the final meeting: "Radio activities are largely free. We will maintain them free—free of monopoly, free in program, and free in speech—but we must also maintain them free of malice and unwholesomeness." As a corollary to the latter part of this declaration he added: "We can protect the home by preventing the entry of printed matter destructive to its ideals, but we must double-guard the radio." The conference approved of this mixed declaration of freedom and restraint. Radio has attempted to follow it ever since in America—with the effort to reconcile the two aspects of the doctrine constantly making trouble for both stations and the government authority.

Out of the Hoover conferences emerged the "American system." It has proved to be different from the radio systems of all other important nations. Two years later Great Britain adopted a form of control centering power and responsibility in a single government corporation responsible to Parliament. This solution has proved simpler than ours. Radio in Great Britain carries no advertising and achieves a centralization that has made its course in England a comparatively smooth one. The American plan provided against this centralization of authority which was regarded as dangerous by the conference members and is still spoken of today as an evil to be avoided even at great sacrifice.

It is to be noted, however, that both the British and American

plans agreed upon one premise—the air was public domain and should be used in the public interest. The American scientists, educators, and industrialists were in agreement about this.

But to return to the character of the system born at the conferences, American radio was planned to hold its seven hundred and fifty stations under a relatively slight restraint from the governing body appointed by the President at Washington. Partly by accident, partly by design, it thereby became responsible to a number of factors, each exerting a measure of power. The government exerted some. The listening public, through its written protests or praise and the knowledge on the part of broadcasters of what it liked to hear, had also from the first an indefinite but powerful influence. The hundreds of advertisers who quickly began to pay for time on the air soon established a more direct and no less powerful control. It was not long until so-called “pressure groups”—organizations with particular interests or causes to serve—made their influence felt. So did public and semi-public bodies: colleges, organizations for the betterment of radio, foundations, public schools. Finally, from the first the stations themselves—whether commercial or educational—took over a large amount of authority. All these groups have been at the same time stronger because of the relative looseness of the system and weaker because of its looseness.

This diversity of control has been the source of incessant difficulties as radio has developed. It has also carried its compensations. Let us not forget either fact as we follow the course of education in this complicated world. No understanding of American radio is possible if we do.

## The Troubles We've Known

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THE broadcasting system which the Hoover conferences had all but prayerfully shaped found itself in difficulties before its birth, and through its infancy the road it traveled was rocky. We can scarcely understand the development of education by radio in America without tracing briefly these beginnings of present broadcasting, for they condition sharply the beginnings of education on the air.

We may go back a moment to the legal difficulties which developed under the crude Radio Act of 1912. We have seen that Mr. Hoover decided to exercise power until he discovered whether or not he had it. A judicial decision in the District of Columbia in 1923 offered the first information as to his authority: he had to issue a license for broadcasting to anyone who desired it! However, the court also affirmed his power to allot frequencies and, by implication, to regulate in other ways the conduct of the stations. But three years later a Federal court in Illinois denied that the Secretary of Commerce had such rights. He could grant licenses, but "the Congress has withheld from him the power to prescribe additional regulations." Hoover had been allotting frequencies and making various decisions as to broadcasting practice, but all control was now shattered as if by a bombshell. Appealed to for counsel, the Attorney General on

July 8, 1926, fully confirmed by an opinion the decision of the court. The government had merely the "authority" to pass out free tickets of admission into the broadcasting arena to all who demanded them!

There followed what has been known as "the period of the breakdown of the law." Obviously, Congress would have to deal with the situation if order was to be achieved. But Congress was too confused and ignorant to take immediate action. Meanwhile, a number of stations took advantage of the existing chaos to select their own frequencies and hours of broadcasting. Others, disposed to be more responsible, felt that they had no choice but to make the best adjustment they could. Soon one hundred and twenty-nine stations were operating on frequencies outside the regularly authorized scale. Some two hundred and fifty new broadcasters secured licenses and "undertook to find perches on which to light." Naturally the result was bedlam. As Orestes H. Caldwell, a member of the government authority soon to be established, later described it, "Heterodyne interference between broadcasters on the same wave length became so bad at many points on the dial that the listener might suppose instead of a receiving set he had a peanut roaster with assorted whistles."

Finally, after seven months of effort, Congress on February 23, 1927, passed a Radio Act which substantially carried out in law the program suggested by the Hoover conferences. A Federal Radio Commission of five members was created. This Commission had supervisory power over all radio activities, of which broadcasting was but one. But in this particular field it was endowed with power to grant or refuse licenses on the basis of "public interest, convenience, and necessity." It was to classify stations, prescribe wave lengths, determine locations, and regulate apparatus employed. It could order records of programs to

be kept and submitted to it, could hold hearings, summon witnesses, compel the submission of books, undertake investigations, and make expenditures. It could specify the duration for which licenses were held and grant or deny their renewal in the public interest. But it could not exercise any direct censorship over the broadcasts of stations, although it was charged to observe certain provisions prohibiting "obscene, indecent, or profane language," and, in considering the renewal of licenses, it quickly assumed the right to consider the general character of a station's work, again under the command to serve "public interest, convenience, and necessity."

There were seven hundred and thirty-two stations in existence when the new Commission began its work. It had to review all existing licenses, confirm frequencies as used, or assign new ones, prescribe rules for hearings, settle questions with regard to equipment and hours of broadcasting, and deal with innumerable other matters. It promptly established a temporary sixty-day license term, which later was changed to ninety days, and still later to six months, the present term. It made adjustments of wave lengths to protect existing stations and began to hold hearings in the cases of stations it considered of questionable value. By June 30, 1928, forty-seven stations had voluntarily surrendered their licenses. In the summer of 1928 the Commission summoned one hundred and sixty-two broadcasters to show cause why their licenses should not be revoked. As a result, some stations were limited in time, some were ordered to improve the general character of their programs, and a number were discontinued. All told, sixty-two more were eliminated. Late in 1929 the system was beginning to show promise of order, with five hundred and eighty-four stations operating.

The imposition of this definite administrative authority had

important results for radio in general and for education in particular.

As to the broadcasters, for the first time a stable system had been established in which they could operate with assurance as to their legal status. This fact enabled them to give the public a service which began to reflect the mechanical improvements which had been made constantly, and the first not-too-sturdy efforts toward the creation of a radio art. They were no longer a scattered group of experimenters. A number of the weaker and more irresponsible stations had dropped out of an activity which now meant regular service and, consequently, a definite financial obligation. The usual haphazard program of phonograph records, hasty talks, and amateur singers was developing everywhere into an effort (often still far from successful) to give competent entertainment and useful information.

This movement was assisted by the formation of the National Broadcasting Company on November 1, 1926. The Radio Corporation of America, established in 1919 to protect and use American radio patents and to develop American radio in general, was the parent of the new organization. The R.C.A. represented the cooperative activity of several organizations which were prominent in the electrical and communications fields: the General Electric Company, the American Telephone and Telegraph Company, the Western Electric Company, and the Westinghouse Electric and Manufacturing Company. Three of these companies were interested in the manufacture of radio apparatus, and the fourth controlled wire lines which it now, in 1926, proposed to use in order to connect a series of stations. All the electric companies had operated stations, and these were now put under a common control, certain other stations were brought

in as affiliated members, and three "networks" were established: the Blue, with six stations, the Red, with twenty-four, and the Pacific Coast with seven.<sup>1</sup>

This step had been taken while Congress was shaping the new legislation, and on November 15, 1926, an initial program was launched which the Company asserted was heard by more than 10,000,000 people. Tito Ruffo and Mary Garden sang, Harold Bauer played, Walter Damrosch was heard leading the New York Symphony Orchestra, Weber and Fields and Will Rogers presented comedy broadcasts, and the Goldman Band sent its strains over the air. With the Federal Radio Commission functioning early in 1927, the new organization stood ready to expand its activities as a part of an organized radio system.

Later in the same year another chain of stations was organized which, after several changes of name, was to emerge as the Columbia Broadcasting System. But for several years it was a struggling organization which did not compare in power with the National Broadcasting Company. Indeed, the financial and technical resources of the latter organization at that time made

<sup>1</sup> At this time the American Telephone and Telegraph Company sold its New York station, WEAf, outright to the new organization and withdrew from the broadcasting field, although maintaining an active relationship to it through the leasing of wires for radio hookups. The Westinghouse interests contracted with N.B.C. for the latter to manage its stations WJZ in New York and KFAX at Hastings, Nebraska. N.B.C. programs were to be provided for its stations KDKA (Pittsburgh), WBZ (Springfield, Mass.), WBZA (Boston), and KYW (Chicago). The Radio Corporation of America and the General Electric Company made similar contracts for management and service as regarded WRC (Washington, D. C.) and WGY (Schenectady) respectively. Other independent stations were then or shortly afterward brought into N.B.C. under contracts to receive service from it. See Reports of the Advisory Council, 1928-1933. National Broadcasting Company, pp. 7, 14, and 15 (1927).



it dominant in the entire field so far as example and leadership were concerned. "In 1927," recently remarked a worker in the radio field, "N.B.C. *was* radio."

We can see something of what was happening to education in the new radio world by noting the attitude and practice of this most powerful of broadcasting organizations toward the idea of learning by air waves.

Much of the idealism which had been voiced at the Hoover conferences seemed to have been carried into the National Broadcasting Company by Owen D. Young, the chairman of its Advisory Council, and by M. H. Aylesworth, its president, and others associated with it. Young, in his first address to the Council, set the goal of the networks as "high class broadcasting widely distributed." He felt that while "it is also the object of the National Broadcasting Company to make radio broadcasting self-supporting," the objective must be "the greatest possible public service."<sup>2</sup> He pictured to members of the Council, as a part of this service, a great university of the air. This would enlist outstanding artists, professional men, and educators in a nationwide service to the American people. The Advisory Council established committees on agriculture, church activities, education, labor, music, and women's activities.

Meanwhile, the Company had proceeded to present from its stations statesmen like President Calvin Coolidge and Governor Alfred E. Smith of New York; singers like Mary Garden, John McCormack, Martinelli, and Schumann-Heink; pianists and

<sup>2</sup> On January 30, 1929, after three years of experience with N.B.C., Mr. Young stated of the company: "Its aim has never been to make money but rather to offer programs of such varied interest that our people could not afford to miss them." *Ibid.* p. 8 (1927) and p. 6 (1929).

violinists like Hofmann, Elman, and Spalding; composers and conductors like Gershwin, Mengelberg, and Toscanini; actors and comedians like Eddie Cantor, Elsie Janis, and Laurette Taylor; preachers like Cadman and Fosdick; and labor leaders like William Green. Operatic performances, light opera broadcasts, dramas, band concerts, lectures on politics, education, and agriculture, together with news, sport, and weather service, had made a part of the N.B.C. program. Sponsored programs with advertising, of course, went hand in hand with the finer features, and the advertising on non-network stations had begun to provoke strong disapproval. But N.B.C. practices were commendable. Its advertisers were selected carefully and regulated with discretion, and they were furnishing programs on which some of the most popular of the new radio "artists" appeared.

All the artistic and educational features listed above had been presented between November, 1926, and March, 1927, and for 1927-28 President Aylesworth could offer an even more impressive list. It showed a number of courses and individual lectures by eminent psychologists, university teachers, and educators—among them Irving Fisher, Livingston Farrand, and Nicholas Murray Butler. Levering Tyson, then Associate Director of Extension at Columbia University, had organized for N.B.C. the first notable series of educational broadcasts by the faculty of one of the great universities, and the educators mentioned above had appeared on his programs. Mr. Aylesworth also noted proudly certain "sustaining" programs presented by the National Broadcasting Company itself—such as Great Moments in History, Biblical Drama, the National Grand Opera (organized especially for broadcasting), and concerts for the public schools, led by Walter Damrosch. With 1928 came the first broadcasts of

grand opera from the stage—the Chicago Civic Opera. Damrosch's weekly Music Appreciation Hour was begun in the fall of 1928, and the Metropolitan Opera broadcasts began in 1931. Religious and agricultural broadcasting were thriving during these years; the American Bar Association took the air with a series of talks on The Fundamentals of the Law, and while Mr. Aylesworth reported that "in the field of education proper it has seemed wise to make haste slowly," colleges and universities were invited to broadcast and did. In 1930 Mr. Aylesworth promised that "we shall soon undertake general educational work," preferably under a group of responsible educators. "When they are ready," he declared, "we will place our facilities at their disposal without charge."

However, stations outside the N.B.C. network were not behaving so well. While many presented sporadic offerings of an educational nature, they were also opening their doors to advertisers of a questionable type. Often the sponsor who bought his time used it with startling freedom. Solid chunks of advertising greeted the bewildered listener. Products from depilatories and laxatives to cure-all patent medicines were urged upon him. As the depression crept upon America, the quality of advertising went down and the privileges of the advertiser increased. The commercial aspect of American radio began to stand forth as a menace to the development of a respectable broadcasting program.

In this jumble of good and bad the progress of education was anything but happy. Its cause was assisted little by the attitude of the educators, who had now fallen into two main divisions. One was imbued with a vision of the impending importance of radio as an instrument for education. It was composed to a large

extent of young men: physicists and electrical engineers and publicity agents, but fortunately it also included a number of outstanding scientists, forward-looking executives in the great foundations, and a few leaders in national and state education. Unfortunately, the other group was contemptuous of radio or doubtful or indifferent toward it, and this body of educators included most university presidents and boards of trustees, most public school officials, and the greater part of the college faculties.

The attitude of the second and numerically larger array of schoolmen had been reflected to an extent in the brief history of educationally owned stations. We have seen that the early rush of colleges to get broadcasting licenses had brought 73 institutions into the field by the end of 1922. The interest continued in 1923, with 39 obtaining permits, and in 1924, with 38. In 1925 and 1926 there were more than 100 educational stations active in radio, or about one seventh of the full number. It is impossible to fix a set figure, for colleges were constantly securing and relinquishing licenses, and the total varied from month to month. But with 1927 there began a steady decline, and by 1929 there were but 62 educationally owned broadcasting stations.

There were several reasons why they had diminished in number and with ensuing years would continue to grow fewer. Most of these reasons might be lumped together under a statement that American radio had achieved a fixed character, and that this character operated to discourage colleges from playing a role in radio. The conversion of radio into a business was perhaps the chief factor. Business meant competition; and competition meant more expensive equipment, studios, paid artists,

sponsored programs aiming at wide popularity. The colleges were forced to meet this competition. To do so, money was required. So also was broadcasting talent. So was trained technical direction, involving some kind of office and engineering force. Where they had previously broadcast at such times and to such an extent as they had found convenient, they must now produce continuous service for the hours their licenses specified or relinquish their frequencies. Radio, in other words, was no longer an experimental toy, but a serious, full-time activity which grew more exacting in its demands with every day. The Federal Radio Commission was setting standards for equipment and demanding continuous and capable use of the frequencies it gave to its licensees.

Yet the colleges could have met these requirements had they been eager to do so. Usually the young technicians were. But the presidents and boards of trustees were not. Many of them had amusedly encouraged their stations while broadcasting was an inexpensive plaything. When it began to mean expenditures of from \$2,500 to \$10,000 a year and up, they frowned. They felt that broadcasting was a mere novelty whose vogue would soon wear out. They doubted if it could serve education seriously (and in 1927 it rarely could) or even help the college as a publicity "stunt." Heads of colleges were not even inclined to urge their staffs to accept invitations to broadcast over friendly commercial stations. Their faculties in the main agreed with them.

A director of extension work in a large university read on the morning of November 3, 1920, of the broadcast from KDKA of the Harding-Cox election returns. His imagination was fired with the idea that here in broadcasting was a great tool for education. He rushed to the office of the president of the university

and waited all morning for an opportunity to unfold the vision that had come to him. The president at length appeared and listened to an enthusiastic picture of what the institution might do with radio. Then he said, in effect: "Don't bother with that. There are gadgets turning up every week in this country, and this won't amount to anything." Nor did his attitude change as radio developed. In 1924 he refused an opportunity to acquire a frequency for the institution and thus start what could have been one of the best college stations of the country. Two years later he was apathetic toward cooperating with important radio stations that invited the university to use their facilities.

This president's attitude was a characteristic one among the heads of the universities. Not unnaturally, they looked at radio as it was and found it crude and blatant. The growing abuses of advertising tended to convince them that the entire activity was unfitted for academic use. And the majority of their faculties were, if anything, more indifferent. Only in a few dozen American colleges were educational stations able to struggle on, occasionally operating with imagination and energy, as in Ohio, where the state university and the department of education launched the Ohio School of the Air in 1929; or Wisconsin, where two vigorous state-owned stations were operating; or Iowa, where both the state university and the agricultural college at Ames developed excellently planned broadcasts appealing to housewives, farmers, and others interested in educational programs. It should be added that from the beginning, although surrounded by commercial competitors, the college stations had almost invariably operated on a nonprofit basis, accepting no advertising.

Thus by 1930 the educational stations had lagged far behind

the commercial ones. Many paid the penalty for neglect with extinction. Others paid in a sharp curtailment of time and a comparative decline in power. For their business-motivated rivals were petitioning for 10,000 and 50,000 watt plants while the colleges operated with 100, 500, or 1,000 watts. Levering Tyson, who was now preparing to devote his entire time to the development of education by radio, declared in 1930 that educators must shoulder a large share of blame for the failure of serious programs to occupy a larger portion of broadcasting time.

They had, he conceded, a just grievance in the "intense commercial spirit" of the radio industry. But they had shown an indifference which was unfortunate; and many of their broadcasts had lacked frequently the qualities of interest which were necessary to hold listeners. "Broadcasters were ready and willing to use every available means by which they could give their programs universal appeal," he concluded. "The industry can not be blamed for the fact that educators did not provide educative material that was both authoritative and filled with human interest."<sup>a</sup>

When Mr. Tyson wrote these words he had already helped to shape a definite plan for rallying the scattered forces of education about an organization which would have a philosophy as to the use of radio and the power to put it to work. This effort had drawn its strength from two sources. In 1929 the Secretary of the Interior, Ray Lyman Wilbur (in whose department was located the Office of Education), had appointed a committee to investigate the radio situation as it affected education. About the same time the Carnegie Corporation of New York had voted

<sup>a</sup> *Education Tunes In*, by Levering Tyson. American Association for Adult Education, 1930, pp. 27-28.

an appropriation to the American Association for Adult Education which was to be used for making a survey of education in the field of radio, with the idea of bringing together those who were interested in educational broadcasting. In 1930 the two efforts were merged.

It was finally agreed by all concerned that an experimental organization should be created in the radio field. It would combine the interest of the government, the radio broadcasting industry, educational and semi-educational organizations, and eminent individuals interested in educational broadcasting. The National Advisory Council on Radio in Education emerged, with the emphatic approval of Secretary Wilbur and Commissioner of Education William J. Cooper; of General C. McK. Saltzman, Chairman of the F.R.C.; of Owen D. Young, Chairman of the N.B.C. Advisory Council, and of many educators and prominent citizens. The Council, composed of forty members, began active work on July 1, 1930. Funds for its support for a three-year period had been guaranteed by John D. Rockefeller, Jr., and the Carnegie Corporation of New York.

But only several months after its formation an event occurred which revealed the uncertain state of educational opinion. Commissioner Cooper, although one of the leaders in the formation of the National Advisory Council on Radio in Education, or the NACRE, as it was soon called, became a sponsor of a new organization with an entirely different policy. This was the National Committee on Education by Radio. Supported by a five-year grant from the Payne Fund, it was composed of a number of educators who had come to feel that the commercial interests which dominated American radio were in reality unfriendly to the development of educational broadcasting and that a modifi-



cation of our system was necessary along the lines of much more stringent regulation, which they proposed should take the form of setting aside fifteen per cent of the total broadcasting frequencies for educational service. They invited certain educational organizations, among them the NACRE, to join in their effort to achieve this end.

The success of such a policy meant drastic changes in the existing character of radio and aroused the antagonism of the non-educational stations. On the other hand, the new movement drew a definite support from many college-owned stations, for reasons which we shall examine later. Finally, it caused a change of immediate program on the part of the National Advisory Council. This organization had proposed to try to work effectively through the agencies that existed. Harmony among all the interests involved had been highly desirable, and there seemed to be a prospect of achieving it. Now this hope of harmony had been temporarily shattered, and three clearly defined groups had been created: the commercial broadcasters, who naturally proposed to defend their interests; the National Committee on Education by Radio, which proposed to alter the existing system and establish educational radio as a powerful force publicly administered; and the National Advisory Council on Radio in Education, which believed that the interests of education might be served through radio as it was constituted and that the attempt to serve them in this fashion (which had not yet been made effectively) should be carried on until it proved definitely to be a failure or a success.

The Council's decision was, in Mr. Tyson's words, "that it would not be a party to the controversy and would proceed as it had originally planned." But it felt that cooperation, while

still to be pursued, could better be attempted at a more favorable time. The NACRE turned to other fields: experiment and demonstration, inquiry, conferences, and "the accumulation and distribution of fact about all phases of the problem of education by radio." The accumulation of a library on radio and education, the issuance of monographs on aspects of the field of interest to educators, and the holding of annual assemblies designed to bring workers engaged in education by radio together to discuss important problems made up an important part of its work during the succeeding years.

The creation of several series of educational programs perhaps attracted even more attention to the Council and for a time was its dominant activity. The programs represented the most comprehensive effort yet made to carry education to the public by air. They began in 1931 and continued for four years. It is necessary to consider in some detail the character of this extensive experiment, for it was to affect educational broadcasting in important ways.

The first programs were undertaken at the invitation of the National Broadcasting Company, which offered evening time for a period of four years. Later the Columbia Broadcasting System accepted certain programs for its network. The effort in all cases was to achieve a national service and to render it through the most distinguished men and women available in various fields of study. Mr. Tyson later described another characteristic of the undertaking: "It has been believed from the start," he said in 1933, "that to be truly educational a program must, first, have an audience assembled for it ready and qualified to appreciate what comes to it; second, that the audience must be held and must be stimulated to follow up the broad-

cast with existing devices for that purpose, or additional devices must be created. In all its program activities the Council has attempted to 'merchandise its wares.' " Thus, each program was publicized as effectively as possible; printed or mimeographed aids to study were often furnished free or at cost; and information was given as to libraries and museums where further study could be pursued.

Altogether there were twelve series presented, although some of these were really a succession of groups in themselves. The character of the broadcasts can be recognized from the series titles. These were: American Labor and the Nation; The Lawyer and the Public; Doctors, Dollars, and Disease; You and Your Government; More for Your Money; Art in America, 1600-1865; Art in America, 1865 to the Present; Psychology Today; Vocational Guidance; Coping with Crime; Economics and the New Deal; and Economics in a Changing Social Order.

The programs were mostly lectures, but as they brought experience with them, dialogue, panel discussions, and the use of dramatic "spots" crept in. These represented pioneering practices in the broadcasting of adult education at that time. Among the participants were men and women of distinction in their fields and often of national reputation. They included such men as Nicholas Murray Butler, Robert M. Hutchins, James R. Angell, William Green, John Dewey, Stuart Chase, William Hard, Matthew Woll, Ray Lyman Wilbur, Robert A. Millikan, and Livingston Farrand.

Unfortunately, the depression cut down the available funds for the presentation of the programs. It was impossible to pay the speakers as much as had been expected, and money available for publicity was sharply reduced. But the NACRE, together

with such cooperating organizations as the American Academy of Political and Social Science, the American Bar Association, the American Federation of Arts, the American Federation of Labor, and the League for Industrial Democracy, met the difficult conditions it faced and maintained the greater part of its plan and the standard of its broadcasts. Other difficulties besides the financial ones lay in disagreements between educators and the networks and in the inexperience of the speakers with radio. These will be considered in a later section.

The entire work was ground breaking. Individual educational broadcasts had been given before. Courses had been given. But never had a plan for adult education embracing such varied subjects been launched, never had it employed such consistently high talent, and never before had it been so carefully prepared for and followed through. Nor had the commercial broadcasters cooperated previously with a national group of educators, giving of their best time and their professional skill.<sup>4</sup> The impact of the programs on stations, educators, and listeners was tremendous. A preview of great educational possibilities had been given, at once challenging and stimulating. The very defects which were revealed were potential tools for further experimentation. The work revealed grave difficulties in carrying forward a broad program sponsored by eminent educators and the leading broadcasters in cooperation; however, it did not prove that cooperation was impossible. Further experience was necessary to show what was possible for education in the existing radio system.

<sup>4</sup> The American School of the Air, established by C.B.S. in February, 1930, offered a program for schools (which was also followed by large adult audiences) comparable in scope and thoroughness with the NACRE broadcasts.

## Educators on the Warpath

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THIS gigantic effort by one group of educators to work with the "industry" had hardly been launched before the National Committee on Education by Radio had demanded from Congress a definite allocation of facilities for education. Senator Simeon D. Fess of Ohio in January, 1931, introduced a bill embodying the exact proposal of the organization: fifteen per cent of all available broadcasting frequencies.

It has been seen that this movement drove a wedge between two groups of educators—those supporting the allocation on the one hand and a more moderate group on the other. What had been the motivating force behind this assault upon the existing radio system?

It was a force which the moderates as well as the extremists felt but concerning which they were more tentative in attitude. There was no question but that by 1931 the aspect of the radio business had assumed proportions at once large and menacing. For a time its character was to grow worse rather than better. The National Broadcasting Company during its first years of activity had worked to establish the high standards which had been vaguely yet earnestly outlined by the members of the Hoover conferences. But many individual stations had not, nor until its reorganization under new owners in 1929, had N.B.C.'s

rival, the Columbia Broadcasting System. With that year came the depression. As it deepened, many of the more stable firms cut down their appropriations for radio advertising. Both networks found themselves with new clients of a more aggressive character, and the type of advertising steadily grew more urgent and questionable. To observers outside the broadcasting offices, radio seemed to have surrendered unreservedly to the profit incentive.

N.B.C. had been organized to provide programs which would attract an increasing number of radio listeners and thus create sales of sets for R.C.A. The income for both organizations was to be realized chiefly from these sales; N.B.C. was expected to be self-supporting but not highly profitable. However, the possibilities for profit were soon clearly perceived, and as times grew harder it seemed necessary to make broadcasting more a business undertaking than had been anticipated. With the enforced dissolution of the R.C.A. patent pool in 1932, came certain changes in the personnel of N.B.C. These changes had an influence in making the company's policy less idealistic and more realistic.

The entire course of radio was viewed with dissatisfaction by some of the pioneers who had advocated private control of broadcasting. One of these, who had attended the Hoover conferences, expressed this feeling forcibly in 1931. He met an educational leader, active in broadcasting, on the street. "So you're in radio again," he said. "You're a damned fool. If we fellows who started things in 1926 had foreseen where broadcasting would go, we'd have gathered together all our equipment and chucked the last scrap of it into the river."

The educators identified with the educationally owned stations, together with a large body of others interested in the

future of education by radio, resented the character of American broadcasting even more bitterly than did some of the radio pioneers.

In the Middle West, particularly, resentment was sharp. There education had been aided by the Federal land grants. As public agencies, colleges had received a part of the public domain. Now there had appeared a new realm, the air; and this had been declared a public domain also. What more logical than that a part of it should go to education, just as had part of the American land? Yet if a share of broadcasting privileges was to be won, it must be demanded, and, if necessary, fought for.

Again, many educators felt that the decline in the number of college-owned stations was directly traceable to commercial interests in radio and their influence upon the Federal Radio Commission. Chairman Joy Elmer Morgan of the National Committee on Education by Radio declared in 1931 that between January 1 and August 1, 1930, twenty-three educational stations had been "forced to close their doors" because commercial rivals had applied for their frequencies, or because of a too exacting attitude on the part of the Commission. It was asserted that until education had a clear and adequate place in broadcasting it could look for little progress. Its hope lay in securing the percentage of facilities that was advocated by the Committee. Even if educators could not immediately use fifteen per cent of the frequencies with efficiency, they would soon respond to the unchallenged title to do so.

Naturally, the commercial broadcasters had meanwhile prepared vigorously to defend their existing rights. The Federal Radio Commission was sympathetic with them. Alarmed at the prospect of disrupting their painfully readjusted system, Com-

mission members disapproved publicly of the proposed allocation. With Henry A. Bellows of the Columbia system declaring that "a legal decree of divorce between education and commercial broadcasting" would be a disaster for education itself and that educators could have all the time they wanted on the air if they "did not bore the listeners too much," and with Commissioner Lafount asserting that "more and more" time was being given to education, which would be best served by letting business operate the plant, the Fess Bill steadily lost whatever prospects it had had for consideration by Congress. It failed to be reported out of committee.

However, defeat produced no sense of reconciliation. Rather, it was a goad to which not only the educational stations and their supporters but also many university men and eminent writers and speakers responded. They renewed their protests against the character of commercial broadcasting. American radio was characterized as "a vast cacophonous sales mart of the air," and the inventor, Lee De Forest, denounced the "continuous drivel of second-rate jazz" and the "impudent commands to buy or sell" which he found to be its dominant characteristics. "A new policy must aim at the restriction or elimination of commercialism," declared Jerome Kerwin of the University of Chicago.

A specific charge against the commercial stations was that they were exercising an unwarranted censorship over broadcasts by educators and public speakers. Critics cited instances in which such persons had been asked to delete portions of their speeches against which there could be no just complaint. In other cases, they declared, passages to which stations objected had been excised in the station's control room by interrupting



transmission. Advertisers also had censored material on programs that they sponsored. At the same time, it was alleged, groups with ideas of which the broadcasters presumably approved were given free opportunity to spread propaganda. Educators saw in such conduct an attempt to mold the thinking of the American public in a sinister fashion.

Furthermore, educators continued to protest against the steady elimination of educational stations and at the action of the Federal Radio Commission in giving many of them less time and poorer frequencies and imposing what the college radio officials regarded as unreasonable obligations in the way of installing new equipment. (Regulations with respect to equipment were, of course, general, and many commercial stations felt the pinch of the Commission's orders and protested as loudly as any educational broadcaster.) Educators charged that the Commission was influenced by the commercial broadcasters and that the latter were carrying on a campaign of slow extermination against college radio stations. Finally, there was a somewhat bewildered but indignant feeling that radio was slipping out of the hands of the universities and that a powerful agency that might be used for positive good was being seized by men interested in profit and turned to ignoble purposes.

We have seen that there was just reason for many of the complaints made against commercial broadcasting. However, as to the "persecution" of educational stations, the facts do not seem to have been what certain zealous educators had proclaimed them to be. A searching study made by S. E. Frost, Jr., of the history of educational stations indicates clearly that the chief reasons why most of these organizations had abandoned their radio facilities had been indifference on the part of college

authorities, lack of money to maintain a proper plant, and lack of talent to produce good programs. In 1936 only three colleges, in reviewing the circumstances of their earlier withdrawal from broadcasting, asserted that they had been forced out by the Commission or commercial rivals, according to Mr. Frost.<sup>1</sup>

Probably this figure does not tell more than two thirds or three quarters of the story. There seems to be clear enough evidence that a number of educational stations were crowded into fewer hours or forced to sell out by the aggressive tactics of broadcasters who were in the business to make money. The University of Kansas station, KFKU, shared a frequency with a commercial station and found its hours pared down until it retained but five a week. WBAA, at Purdue, similarly lost much of its time, though this has since been more than recovered. WCAJ, at Nebraska Wesleyan University, was put to such expense and trouble defending its privileges from Station WOW that it finally sold out to the aggressive rival who three times petitioned the Federal Radio Commission to grant it the WCAJ facilities because it could use them better! The University of Minnesota station was similarly attacked, and so were the two state-owned stations of Wisconsin, WHA and WLBL. But all these defended themselves successfully. Other cases of attacks could be cited.

Yet it is unproved despite such happenings that the Commission was unfriendly to educational stations or that the latter were the particular prey of rapacious commercial competitors. The Commission was desperately busy from 1927 to 1929 trying

<sup>1</sup> *Proceedings of Eighth Annual Institute*, Institute for Education by Radio, 1937. These data have been incorporated in Mr. Frost's volume, *Is American Radio Democratic?* University of Chicago Press, 1937.

to accommodate too great a number of licensees. It made various regulations designed to weed out the incompetent and inconsequential broadcasters. These made existence difficult or impossible for weak stations, both commercial and educational. Unfortunately, a number of educational stations were of a wretched quality, poor not only in equipment but also in program standards. The elimination of some of these was welcomed by the communities in which they functioned.

Again, the Commission was obliged to take account of all petitions by one station for another's facilities. In doing so, it necessarily made investigations into the quality of the service rendered by the station under attack and held hearings where both parties could present testimony. It is true that it sometimes permitted successive hearings on the cases of individual stations to be held with an astonishing frequency. But the educational stations were not those most persistently under attack. The assaults made by the "commercials" upon each other were far more numerous and devastating. The case of Station WIBO, in Chicago, Illinois, where a station which the owners valued at \$1,000,000 (including equipment and good will), was expunged by the Commission in favor of a minor station in an adjoining state whose senators and representatives claimed that their commonwealth did not have a fair allotment of radio frequencies, is an example of how ferocious, protracted, and destructive were the battles between the profit-making broadcasters. Persecution of educational stations as such does not seem to have existed; they were merely forced to struggle for survival in a crowded and militant world. However, it is a pertinent question if the Commission should not have taken more specific measures to protect the efforts of the educational institutions of the land. It

is a plain fact, whatever its significance, that the American system has not offered such protection.

In 1934 came a second opportunity for action by those educators who were militantly dissatisfied with broadcasting conditions. In that year Congress carried out a long-standing proposal to merge radio with other forms of communication under a common control. A Federal Communications Commission was planned. The difficulties of a station operated by a Roman Catholic institution concerning its time on the air had aroused Catholic feeling in favor of some action for education. Labor too, had had several grievances and also felt disposed to work for a modification of the broadcasting system. These groups, with the educators, were influential enough so that Congress, in framing the act to create a new Commission, took account of their protests. It asked the Federal Communications Commission, which it was creating, to "study the proposal that Congress by statute allocate fixed percentages of radio broadcasting facilities to particular types or kinds of nonprofit radio programs or to persons identified with particular types or kinds of nonprofit activities," and report, with recommendations, not later than February 1, 1935.

As a result of this mandate, hearings were set by the new Commission for October 1, 1934, and all interested parties were invited to appear and testify. The battle was joined again.

However, the educators who now moved upon Washington to appear before the new Commission represented an army divided against itself. As we have seen, the National Committee on Education by Radio led but one definite group. Even the members of this group varied in their convictions. All felt that something should be done for education. At the same time,

some were inclined to feel that a definite allocation of frequencies for education might be a strategic mistake. This was the case with A. G. Crane, President of the University of Wyoming, who was later to head the National Committee on Education by Radio. Again, Father Harney of the Missionary Society of St. Paul, while emphatically denouncing in his address before the Commission the abuses of commercial broadcasting, and advocating a "remodeling" of the existing system, was cautious as to specific recommendations. Labor, too, had won new facilities for its Chicago station, and now adopted a conciliatory attitude.

Other educators, more extreme, advocated various panaceas: a tax on stations to be used for educational purposes; a chain of government stations; a chain of state stations; the imposition of program regulation. Finally, a large body of moderates, headed by representatives of the National Advisory Council on Radio in Education, and supported essentially by independents like John W. Studebaker, United States Commissioner of Education, felt that whatever the faults of radio as it existed, there was a question if it was tactical at the present time to provide facilities which even the "radicals" admitted educators could not yet use in full. They urged rather that more intensive efforts should be made to work with existing facilities.

In contrast to this divided army, the broadcasters presented a united front. They pointed out the difficulty of agreeing upon the character of any reform; even their opponents could not unite behind a specific plan. They argued, in addition, that the segregation of certain frequencies or even the arbitrary allocation of certain hours for educational broadcasting would disrupt a system that had just begun to function.

They professed also a complete willingness to put their

facilities at the disposal of educators. "We hold our licenses by serving the public interest, convenience, and necessity," declared William S. Paley, President of the Columbia Broadcasting System. "And only by adequate cooperation with all public-spirited groups can we be deemed to perform the conditions of our contract. Our constant eagerness to cooperate with every representative group that needs our facilities is sound policy."

Merlin H. Aylesworth, President of the National Broadcasting Company, presented evidence to show that the commercial stations had actually extended such cooperation. With other broadcasters, he offered letters from eminent educators and introduced such men and women as witnesses to show the improved quality of programs and the generous time allotted to education. The networks and individual commercial stations submitted also impressive lists of educational programs of their own making, like Columbia's American School of the Air, N.B.C.'s Music Appreciation Hour, and the Metropolitan Opera broadcasts. They pointed to the NACRE programs which had now run for three years. They were able to marshal an impressive list of broadcasts of news and public events and public discussions. They confessed that errors had been made, but argued that the character of education by radio was as yet far from fully determined.

Finally, they pleaded for cooperation rather than conflict. "The time has arrived," declared Mr. Aylesworth, "when we must work together to concentrate in planning programs and making available our facilities without any jealousy toward each other and without any attempt to compete."

The result so far as the extremists were concerned was close to a rout. They had failed to make a clear and united case; the

broadcasters had presented a plausible and fully substantiated argument for a maintenance of the existing system.

In December, 1934, the Federal Communications Commission recommended to Congress that "at this time no fixed percentages of radio broadcast facilities be allocated by statute to particular types or kinds of nonprofit radio programs." It gave as reasons that "there is no need for a change in the existing law to accomplish the helpful purposes of the proposal," that there were too many other services needing attention to segregate arbitrarily facilities for any particular service, that "no feasible plan for a definite allocation" had been presented, and that no real demand by the majority of nonprofit organizations or the public had been shown for any specific action.

But the hearings brought more than this negative report on the situation. The Commission promised that it would keep the problem of education before it for future action, and it also took definite steps to see that some progress was made under the conditions actually existing. "In order for nonprofit organizations to obtain the maximum service possible," it declared, "cooperation in good faith by the broadcasters is required. Such cooperation should, therefore, be under the direction and supervision of the Commission." To follow up this suggestion, the Commission called a conference for mutual cooperation between educators and broadcasters. It was to meet May 15, 1935.

As a result of this conference, the Broadcast Division of the Federal Communications Commission set up a Federal Radio Education Committee to "eliminate controversy and misunderstanding" and "promote cooperative arrangements between educators and broadcasters on national, regional, and local bases." As finally constituted, this Committee was headed by

John W. Studebaker, United States Commissioner of Education. It contained, with the chairman, forty members—some of these being outstanding commercial broadcasters, some the representatives of educational stations, some workers in the religious and labor fields, and some the heads of universities and of educational associations like the American Council on Education, the National Advisory Council on Radio in Education, and the National Committee on Education by Radio.

The Commission in effect had said to the warring factions: "You people want something done. Stop talking and get together and work out a concrete program."

With the establishment of this Committee the problem of educational broadcasting may be said to have entered upon the phase in which we find it today. Its importance had been recognized by the Government. A command had been issued by Federal authorities that something definite be done to work out a plan for progress. In this sense the result of the hearings was a victory for all factions. The extremists had at least won official recognition of the importance of their cause. The moderates had won the same recognition—in this their attitude had always been at one with the radicals—and had seen a definite impulse given to a cooperation which they had advocated but with which to date they had been far from satisfied. The broadcasters, finally, had preserved their property rights and had won an opportunity to shape, with a fully representative national group of educators, such plans as might assist them in rendering the service to education which they professed to be eager to afford.

Yet, the Committee represented no more than an opportunity and a hope. Cooperation was to be attempted. But the basic attitudes of all parties concerned remained essentially un-



changed. The future had its latent storms as well as its prospect of sun. What could be done for education in the existing radio system? Enough to satisfy the greater number of educators and the public? If not, what then? These questions the succeeding two years have not yet answered, but much has been done and is still in process which may represent the beginnings of a constructive solution.

## Broadcasting for Profit

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WE have seen that the hearings before the Federal Communications Commission had produced a half-dozen new plans for controlling American radio. But whoever cons the 14,000 pages of testimony taken by the commissioners will perceive that control was not the only subject of inventive disagreement. There were as many varying opinions as to what types of educational broadcasts should be developed and what agencies should be in charge of them.

Much of this confusion with regard to the nature and possible processes of education was already reflected in actual experiments. Accordingly, a turmoil of theory and practice was carried into the deliberations of the new Federal Radio Education Committee. Its early sessions bristled with spoken and unspoken questions.

For example, under whose auspices should educational broadcasting develop? Should state or city school systems take charge of it? Should the Federal Government (through the Office of Education) play the leading role—or should the universities? Should semipublic organizations be dominant? Should regional movements be developed, drawing most of the educational agencies into unified sectional efforts? Should the broadcaster take the chief responsibility? Would radio education mean the

development of new types of educators which existing organizations were little calculated to breed?

There were as many questions about the type of education which radio should develop. We need not rehearse them now. The important fact is that a swarm of ideas and demonstrations had scattered theorists and workers in radio into a score of confused groups. On the horizon of broadcasting hung literally dozens of Utopias. Yet each was unvisited, each vaguely defined. And the road to any of them, although it might start out broad and clear, was soon likely to die in poorly marked tracks needing a road crew and often a surveyor.

Since 1935 there have been two definite improvements in this almost chaotic blending of idea and experimentation. One has consisted in a clearer recognition of its existence, and of the more promising paths of procedure which can be followed. Another has comprised a more extensive practice along certain of these paths. To review this progress and interpret it will be to move toward as definite an understanding of the present and future of broadcasting as we can now hope to achieve.

One can best begin such an attempt with the actual stations and men who send forth the radio programs of America. We have noted that most of our stations are operated as private enterprises, for gain. We have seen also that of the seven hundred which now function a number are educationally owned stations, most of which do not broadcast for profit. There are now thirty-eight of these. The two groups, private and educational, together constitute our radio plant and its operatives. Since almost ninety-five per cent of American broadcasting is done by business organizations manned by businessmen, let us first look at the commercial broadcasters.

We shall find them in plants as varied in appearance as any collection of American post offices or railroad stations. Some are no more than a room or two up dark flights of stairs in districts where buildings are shabby and rentals low. Many occupy half a floor or more of a hotel. Others perch above garages; still others adjoin newspaper offices. Some occupy smart office buildings to which they give their names, or stand like modish factories at the edge of cities, with broad walls of concrete and glass against the conical steel network of their transmission towers. The more extensive stations are often labyrinths of elegant modernistic art, with offices trim in glass and metal, with tall reception rooms, studios, and perhaps a concert auditorium two stories in height. Then there are even more imposing plants in a few of the great centers—Columbia's new Hollywood station, the Mutual's WGN in Chicago, and N.B.C.'s imperial palace at Rockefeller Plaza in New York.

This variety of pattern as to stations follows a larger pattern of control and initiative in broadcasting as a whole. Since 1924, when the American system was a vision vaguely painted by inventors and industrialists, our radio activity has materialized in an impressive fashion. We have seen its beginnings and something of its growth. Let us look at the structure as it stands in 1937.

First of all, there is its physical and financial magnitude. The number of radio sets in America has multiplied to 33,000,000. There are 1,037 manufacturers of equipment. Almost 100,000 people are engaged in various aspects of radio work. Sales of equipment in 1936 (more than 7,000,000 receiving sets and quantities of parts and supplies) totalled \$566,000,000. Time sold to advertisers brought in \$150,000,000. All told, the national

radio bill for the nation was \$891,000,000. These figures are given by the Federal Communications Commission in February, 1937. Business in the present year has run at least twenty per cent higher than in 1936.

So far as broadcasting is concerned, the networks are in more than one sense of outstanding importance. The two which had already sprung up by 1927, connecting station to station by telegraph or telephone wires, have since been joined by a third of national scope, the Mutual Broadcasting Company. Together, the three serve 293 stations—N.B.C., 135, Columbia, 105, and the Mutual, 53.<sup>1</sup>

This total represents more than a third of all the stations in America. However, there are dozens of other networks besides the "nationals." The Yankee, the Keystone, the Inter-City, the Affiliated, the Northwest Triangle, the Don Lee, the Texas Quality—to name only a few of them—bind groups of from 3 to 23 stations together. Many broadcasters in the lesser networks are members of one or more of the bigger ones. However, the nationals aim at something like country-wide service, and the others, called regional, seek to reach only limited areas. Both are highly valuable commercially; for an advertiser through the hooking up of stations is able to gather audiences in whatever area he may wish to sell his goods. Obviously, the networks, by pooling brains and artistic and technical resources, can also offer the public a wider and better choice of programs.

<sup>1</sup> These figures are for September 1, 1937. Technically, there are four national networks, as the Red and the Blue chains of the National Broadcasting Company operate as separate units. However, since they are under the same control and can be combined if the N.B.C. authorities desire, I shall refer to them as one in the discussion that follows. The figure 135 naturally represents the total of the Red and Blue stations

The three great networks represent more than a third of the available radio stations. They represent the best in power and equipment. They have stations on all the forty "clear channels" in the United States—frequencies on which, in theory, only one station operates for the entire country.<sup>3</sup> In transmission power, they control 2,447,600 watts, while independents have only 186,000. Most of the 5,000 and 10,000-watt stations and all the 50,000-watt stations are associated with national networks. Thus, the area and population covered by the great chains is tremendous. N.B.C. and Columbia both claim to make their programs available to 80,000,000 listeners.

However, none of the networks should be thought of as owning all the resources which they command. The National Broadcasting Company has property title to but ten of its stations and leases but five. Columbia owns or leases but nine. The Mutual owns none: it is an association of completely independent

<sup>3</sup> A clear channel is a band of frequencies on which, in theory, only one station operates. Each broadcasting licensee broadcasts at a certain number of impulses per second—e.g., 820,000 cycles, or 820 kc. Station WHAS of Louisville, for example, uses this particular frequency. All frequencies are licensed ten kilocycles apart in number of impulses per second. Thus WHAS has a neighbor just below it at 810 kc. and one above at 830. The 820 kc. channel comprises five kilocycles below its official frequency and five above it—or from 815 to 825 kc. However, on the forty "clear" channels designated by the F C C. there were actually forty-seven stations operating day and night in 1936. Counting stations with daytime only (they create no noticeable interference) there are altogether one hundred, including one in the Hawaiian Islands, on the "clear channels." Of these one hundred, the three national chains control forty-nine. All the 50,000-watt stations are among these, and all but a few with more than 1,000 watts power. Naturally, the effort has been to keep "clear channels" essentially clear. When two or more stations use the same frequency, they are located at points geographically remote from each other, and usually there is but one high powered station on the frequency.

stations. Thus the power of the great chains is dependent for the most part upon exchange of benefits between individual stations (as with the M.B.S.) or between groups of stations and a number of miscellaneous independents (as with N.B.C. and C.B.S.). Yet this power is none the less real, and were the problem of buying stations not a delicate one (for the equipment represents little as compared with the privilege of using a frequency, and the frequency in theory belongs to the public), the list of network-owned stations would be longer. However, the actual situation has shown the influence of local stations to be strong, and many workers in radio feel that, while network service will remain as important as ever or become more important, local broadcasters and their programs will have an even greater growth in influence as time passes. It is certain that they have shown increasing independence and a capacity to take a larger share of the profits than they did at first.

What kind of men are operating these more than 650 privately owned commercial stations? Here, as with the stations themselves, we find a great variety. The higher network officials in New York and some of the owners of large stations elsewhere are financiers with intricate business and political contacts. They think in national and often international terms. In contrast, some owners of small stations have few contacts or interests beyond the little towns in which they operate. But there are certain common qualities which one is likely to find in the greater number of network officials or owners or program managers everywhere.

These may be suggested by the type of work from which most of these men have entered radio. This work was usually not mere business. John Royal, Vice-President in Charge of Pro-

grams for N.B.C., for example, had many years of experience in both the newspaper and theatrical worlds. Alfred J. McCosker, the head of the Mutual system, was formerly a journalist. William S. Paley of Columbia had been engaged in advertising. A number of other station owners are or have been newspaper proprietors or executives. There are engineers among them, too. Certain prominent program managers have been college professors, musicians of some note, actors, dramatic or motion picture "artists" or directors. All have brought with them a certain sensitivity to the public—its character, preferences, and demands. They are likely to have a personable quality, often a dash of the theatrical or artistic. And those radio officials who are young enough to have grown up with broadcasting show an awareness to public sentiment, a pleasantness of address, and a perception of dramatic values which hours of talking into a microphone, studying the tastes of listeners, and directing a succession of "shows" are likely to bring.

It should be added that broadcasting has produced no "kings" like Rockefeller, Morgan, Havemeyer, Harriman, or Gould. Nor has any radio figure become a public legend through his professional skill, like Frohman in the theatre, or the Mayos in medicine, or Edison in invention. Even the leaders have been key-cogs in smoothly turning machines. Or have the machines turned smoothly? No. When the National Broadcasting Company celebrated its tenth anniversary in 1936, none of the original major officers held his initial position or had improved upon it. Columbia has also had several turnovers of executives since its birth. Broadcasting is perhaps not too young to have produced giants, but it has been too uncertain a battlefield for any champion to keep his footing!



As most Americans know, a radio station consists of two physical elements as far as the making of programs is concerned. These are the offices and the studios on the one hand, and the transmitter on the other. Sometimes they are adjacent to each other or even form a part of the same structure; sometimes the transmitter is several miles distant from the microphone. The program, when "taking the air," passes through the control room, where an operator usually looks through a glass window into the studio, exchanges signals with the announcer and actors, and modifies the quality and volume of the sound if he desires. The broadcast then goes by wire to the tower where it is launched upon the air in the form of sound-carrying waves.

The Federal Communications Commission sets certain standards for mechanical apparatus. In most commercial stations equipment is of high quality and is operated with a rigorous attention to mechanical proficiency. Like the apparatus, the delivery of programs is meticulously specialized. They begin on the quarter or half hour or the hour and are timed to the second. Rarely do they run over their allotment of minutes by more than a few moments or fall short of filling it. Advertisements, announcements, entertainment are all subservient to the split-second schedule. The listener who consults his day's program knows exactly what he will hear at a certain hour or fraction of an hour. There is rarely any mechanical breakdown. In this sense, commercial radio in America delivers its audiences a service which makes the streamlined railroad train and the rotary press of a newspaper seem like clumsy amateurs.

The service itself has come with practice to consist of certain types of broadcasting which maintain fairly steady proportions. These proportions are supposedly responsive to public demand.

We shall examine them in detail later; to offer more than a general description here would be anticipatory. The commercial stations are shown by analysis to emphasize light entertainment (chiefly music, variety, and comedy), devoting about sixty per cent of their time to this. They devote the remainder to more serious broadcasts, including news, broadcasts of special events, broadcasts of interest to special groups, serious music, and educational programs of general appeal. For the moment, we need note no more than the fact of the dominance of lighter broadcasts for entertainment purposes, balanced by the presence of broadcasting of a cultural and educational character in smaller proportions. Whether or not the division is a logical one serving "public interest," we shall consider later.

As to the manner in which these programs are presented, one can feel that with the better stations there is always a technical proficiency. This is a proficiency not only of mechanical service but of planning and presentation. The entire day's schedule and the individual programs are both subjects of extensive discussion in which program manager, radio writer, and production manager pool their ideas. Broadcasts are carefully rehearsed and directed. Stations are fully equipped with sound devices to simulate the opening and closing of doors and windows, rain, hail, wind, the crashing of trees, the galloping of horses, the firing of guns, the tolling of bells. Sound records are used for some of these. Mechanical apparatus is used for others. Sometimes the two are artfully blended.

Actors experienced in radio are regularly employed; many stations have what amounts to a little stock company. Advertisers often have their programs prepared by advertising agencies, who then furnish all but the mechanical devices. The

script writer and the radio actor and the production manager have their special language, with terms like "fading," "on the nose," "ad lib," "in the mud," etc. The technique of broadcasting in a commercial station of size is as highly developed as the craft of the stage or the motion picture and as deftly and meticulously exercised.

If one talks with perhaps a hundred of the men who operate the commercial stations and their undoubtedly proficient plants, he will find almost all of them giving a quick recognition to the importance of educational broadcasting. Often this is clearly the result of knowledge that a broadcaster is supposed to be interested in it. There is no better way of proving a service to "public interest, convenience, and necessity," and the broadcaster is constantly aware that with the end of a six-month period he must give to the Federal Communications Commission an accounting of what he has done when he asks for a renewal of his license.

A commercial station has two sources for educational programs: it may take them from the "sustaining" programs of the networks or it may create its own. The latter may be made in the local studio with studio talent or may be supplied by school authorities, colleges, libraries, or various organizations. Usually, a station has both network and local programs of an educational nature.

"We carry all the network educational features," a broadcaster may say when he is asked about education. Or, "We are giving time to a number of educational groups in this community," and he marks a weekly program, showing that the local high school or college, a better homes association, or a

post of the American Legion is appearing regularly on his schedule. Such a broadcaster "opens" his program to what he calls educational broadcasting but gives little or no time to its quality if it is a home product, and is relatively indifferent to what people think of it. It is just "window dressing for the F.C.C."

But there are many broadcasters who are taking more than a passive interest in educational activities—creating features for production, diplomatically cooperating with universities and associations in the development of programs, scrutinizing scripts, and assisting at rehearsals.

Yet whatever his practice, the individual broadcaster, from the network official in the great city to the humblest program manager of a small station, will assure you that education will fare better under his direction than under any other conceivable auspices. He will admit readily that producing educational programs is an activity with thorny aspects. But these, he feels, relate chiefly to the character of the programs and the attitude of the listening audience. No broadcaster wishes to lose his audience, even for a single program. He will then perhaps lose it for the next program, and this impairs what he has to offer to his advertisers. Education is a problem to him because it is often dull and will not hold listeners. But he will often assert that the right type of educational program will draw or keep audiences and that many already do.

"An educator does not want to talk to empty air any more than we wish him to," declared an executive of one of the networks. "He wants public attention, and just as rapidly as the public is willing to give attention to better and better educa-

tional programs, we want to put them on. It is in our own interest to do so. Whatever creates or maintains audiences is profitable to us."

But not only will the broadcaster assert that he is receptive toward education; he will claim also that he is better prepared than anyone else, financially and technically, to put it on the air. He points out that his income from paying programs enables him to develop a modern plant, that he has an adequate office and engineering force to give the educational broadcast an excellent production, and that he has an audience for it. He argues that the service he can render is more complete and of a higher quality than any noncommercial station could afford.

He does not feel that there is an irreconcilable conflict between education and the profit incentive. An adjustment is necessary, but this can be made. He asserts that he can and will make time for education. He points to the fact that only from thirty to fifty per cent of program time is sold and that advertising is sharply censored, both as to its general character and the time it is permitted to consume. He looks for further progress in this direction in the future.

Rather, he contends, the fact that more education is not on the air today is chiefly chargeable to the educator himself. The outstanding crime of the colleges, schools, libraries, and educational organizations is, according to most broadcasters, one of indifference.

"I have gone to these people time and time again," stated the executive of a Boston station, "pleading with them to develop programs, offering them the services of our station and the facilities of a regional network. And time and again I have been told, 'We haven't the time for it,' or 'We aren't radio-minded.' They lack imagination."

He paced the floor of his office indignantly.

"Finally," he resumed, "I found one way of arousing them. I said, 'Do you want ten thousand dollars? I will give it to you. I will give you ten thousand dollars worth of radio time.' Then they became interested."

He shot an arm aloft in an indignant gesture.

*"They can think money," he exploded. "They can't think education."*

All over the country I found station managers making the same complaint. "We have offered our facilities to the college here," they would say, "but nothing has come of it." Or "We don't pretend to be educators. But we have tried to get educational organizations to develop programs for us, and, frankly, it has been very difficult. The top executives are indifferent; faculty members or school teachers say they haven't the time. The Board of Education has talked about doing something, but has never taken any action."

Of course, almost every American radio station carries some educational programs. In many places these are running smoothly, representing active cooperation between broadcaster and educator. Remarks like the above were made where difficulties in cooperation had been experienced, and the station was defending what it confessed to be a showing it would have liked to improve.

Broadcasters also blame educators for a lack of realism and imagination in planning programs, for a superior attitude toward the microphone, and for ineptness in the actual work when it is done.

"I would welcome more educational programs," said one California executive, "but I can't get them. That is, I can't get good suggestions. I will not put dullness on the air; I must keep

my audience. But I have had no creative suggestions from any educational institution or association, although I have constantly tried to get some ideas for programs. This station is wide open for good educational broadcasts."

Other managers complain bitterly of the attitude of educators toward the art of broadcasting. According to the broadcasters, most teachers have no conception of what speaking to the microphone should involve. "They think they can ignore the audience and deliver dull lectures," was a frequent complaint. "They are impatient of suggestions. And when an educator appears, it is often only a few minutes before he is to go on the air: no time for rehearsals or suggestions." Constantly broadcasters point out that the radio is a medium requiring "showmanship," and that the teacher will seldom recognize this fact and adapt his material accordingly. Neither will he make a study of voice or pause; and he too often forgets that what might be read or spoken to an audience may become confusing over the radio. Consequently educational broadcasting, in the broadcaster's opinion, too often lacks the qualities that might hold an audience.

There is, of course, another side to the relationship between broadcasters and educators, and we shall come to it. For the present, I am noting merely the attitude of the men who operate the commercial stations. This attitude, together with a recognition of what they control in the way of physical plants, financial resources, and personnel, helps to round out a sense of what "the industry" offers as an instrument for the development of educational broadcasting. Let us now turn to the educationally owned stations and try to get a picture of them.

## "We Take No Advertising"

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ON the heights above the little city of Madison, with its tree-lined streets and state capitol, lies the campus of the University of Wisconsin. It overlooks rolling hills and the blue water of Lake Mendota. From among the buildings rises the transmission tower of Station WHA, and beneath it the station structure sprawls in easy horizontals.

It is impressive evidence of what the State of Wisconsin has attempted in broadcasting. One enters a spacious lounge where the modernistic walls and fittings blend with Indian rugs and half-Amerind designs. Through an oblong of glass one can view the largest of three studios, of a size to accommodate a seventy-piece band. If one wanders through the central control room, the recording room, and the halls and numerous offices, one has a sense of an extensive activity concentrated in quarters amply and intelligently designed for it. There is an atmosphere, too, of a place devoted to public use. Children and adults sit about the lounge or enter and pass out the door, some of them obviously performers, some there to watch the functioning of an organization in which they feel a pride of possession.

The building is at once the symbol of what might have been, what is, and what may be.

In 1919, when Wisconsin professors were sending regular



broadcasts from their experimental station, 9XM, the University of Wisconsin and an infinite number of other colleges seemed destined to constitute a large if not dominant group in American radio. The prospect was even stronger as late as 1924. While advertising had then become a potential resource for meeting the cost of radio programs, few prophets were sanguine enough of its future to say that it would be almost the sole means of financing entertainment for a growing audience of listeners.

Then, swiftly, as we have seen, the commercial stations of America rose to dominance. With their rise came the decline of those that were educationally owned. What might have happened if some plan of financing radio by a tax on sets or licenses had been accepted in that formative period? The survival of WHA and thirty-seven other publicly owned stations makes that question anything but idle. They remind us that we once faced the possibility of shaping a system quite different from that which we have, and that even today there is a stubbornly persisting heritage from a period of chaos which gives our national broadcasting a dual character.

WHA is the largest of the educational stations in physical plant, one of the largest in transmission power, the richest in financial resources, and probably the most outstanding in the quality of its programs. Furthermore, with WLBL at Stevens Point, Wisconsin, it is one of two stations owned and operated by the State. Its status is indeed a little different from that of most "college" stations in that it is not under the direction of the University, although it cooperates closely with that institution. Technically it occupies a position with regard to the people of Wisconsin roughly paralleling that of the British Broadcast-

ing Corporation with regard to the British people. However, the radio listeners in Great Britain support the B.B.C. by paying a tax on receiving sets, while WHA (like its sister WLBL) shares with other state agencies the money contributed by citizens of Wisconsin through general taxation.

WHA takes no advertising. Its programs consist of instruction and entertainment only. In this respect it is like twenty-five other stations owned by public institutions. The remaining twelve depart from this procedure, although usually to a limited extent. They preserve enough of a noncommercial character so that, considering their ownership, most or all of them may be classed with the other twenty-six as different from stations working primarily for profit.

For the year 1936-37, Station WHA operated on a budget of \$20,000, although it received an additional \$3,950 as a portion of a \$16,400 contribution from the State and the University for the completion of its station building, which has been in course of reconstruction for several years. For 1937-38 it will have a budget of \$25,000. During the past year it maintained a staff of eight full-time and three part-time workers and fifteen N.Y.A. student assistants. It planned and produced all its own programs for a service averaging about eight hours daily and made its own transcriptions (electrical recordings of programs somewhat similar to phonograph records but better suited for radio reproduction). One of these, a broadcast on freehand drawing to Wisconsin public schools, won the award at the Institute for Education by Radio in 1937 for the best recording of an educational program produced by an educational station.

It is a pertinent fact with regard to the educational stations

that they have practically no facilities for interchanging broadcasts and have organized no network.<sup>1</sup> Almost all of them, to be sure, are members of the National Association of Educational Broadcasters, and they have come together yearly in conference at the Institute for Education by Radio, which also invites to Columbus, Ohio, a number of commercial broadcasters doing notable educational work. However, so far as facilities for transmission are concerned they must be considered, in contrast with most of the commercial stations, as separate units.

As such, what is their power and quality? In considering this question, it is pertinent to look at the directors of the educational stations.

In general, they are of two types. There are a few older men, usually in the education, extension, or engineering departments, who have survived from the early days of college broadcasting. They are usually quiet, tactful professors, by no means lacking in spirit, but somewhat battered by a long struggle with indifferent authorities and inclined not to press the claims of the station too insistently.

But most of the university broadcasters are young and aggressive. A few have had experience in commercial radio. Others started as student announcers in their own stations, or in those of other colleges. Still others are associated with the journalism, speech, or engineering departments of their universities, or were formerly in these departments. In the main, they are younger than most commercial executives, more intense and less sophis-

<sup>1</sup> The two Wisconsin stations have cooperated with each other, as has been noted. Stations WOI and WSUI, both operated by Iowa institutions, sometimes cooperate. WOSU relays its programs to a number of Ohio stations.

ticated (although this would not apply to a half dozen or more of the most outstanding), but resourceful and intelligent. Their relative youth is both a handicap and an advantage. Their prestige on the campus may sometimes suffer from it—president, trustees, and faculty are unlikely to share their enthusiasm and may be unresponsive to their influence. But, on the other hand, they incline to be insistent and vigorous in pressing for support and are getting it to an increasing degree. Under their energetic representations I found that in more than half of the colleges I visited, the indifference of college authorities and teachers to radio seems slowly to be changing to interest and pride.

These directors of educational radio centers have fought their battles for equipment and program quality with varying results. Of stations like WHA at Madison, it can be said that they compare favorably in plant and resources with commercial stations of more than average standing. But there are few educational stations like WHA.

WRUF, at the University of Florida, equals the Wisconsin station in power; it has a 5,000 watt transmission plant. It broadcasts for a longer period daily, has had good financial support from the state legislature, and has maintained a well-conceived and energetic program. It takes a limited amount of advertising. WWL, at Loyola University in New Orleans, uses 10,000 watts, but it operates as a commercial station, the university reserving only a small amount of time for itself.

Of those stations depending solely on public funds, KOAC at Corvallis, Oregon, operated by the Oregon State Agricultural College, has a budget of \$19,000, and maintains a program which is comparable in scope and quality to Wisconsin's. It has

a power of 1,000 watts. WOI at Iowa State College, Ames, Iowa, with a much smaller budget, has a 5,000-watt transmitter and a finely conceived program but suffers definitely from being understaffed. WILL at the University of Illinois has just completed a new plant and gone on a new frequency which will give it larger opportunities than it has possessed. The State College of Washington at Pullman also operates with 5,000 watts and maintains long daily programs, although it is struggling with the difficulties of a meager allowance from the State. The Ohio State University Station WOSU, has a modest power allotment (1,000 watts by day and 750 by night), but occupies an excellent frequency, broadcasts in a favorable area geographically, and has an extensive coverage.

Eighteen of the thirty-eight educational stations use less than 1,000 watts, and, although favorable frequencies sometimes give them as wide a coverage as other stations with greater power, in the main their physical plants and the character of their work are comparable with the poorer commercial stations. In fact, it would be difficult to find many commercial stations of such meager resources and small proficiency as the poorest third of the educational stations. We might round out the characterization of the entire group by saying that a few of the educational stations are well equipped and moderately well supplied with funds and that about half of them would be equipped to rival in professional ability commercial stations of modest resources serving limited areas.

Indeed, there is no question but that the majority of the college plants are struggling with difficulties that are sometimes appalling. Their poverty is perhaps their greatest handicap. (This is, of course, usually the result of administrative or legis-

lative indifference.) But lack of adequate power is an important drawback with many, poor frequencies with some, and limited time with others. Heretofore we have not discussed the amount of time which educationally owned stations use, and more than a word about this is needed.

In contrast with most of the "commercials," educational stations broadcast for short periods. There are perhaps a dozen that hold the air for as much as from eight to twelve hours daily. Among these are KOAC, Oregon; WRUF, Florida; WHA, Wisconsin; KWSC, Washington; WILL, Illinois; and WOSU, Ohio. Few of these have night time. WHA does not. Late in 1936 there were but four of the entire educational group that could broadcast in evening hours. For the more energetic stations this is not only a handicap but a grievance. "These stations," complained Manager H. B. McCarty of WHA to the Federal Communications Commission, referring to his own station and WLBL, "can reach only the housewives, the children in schools, the unemployed, and the farmers at noon." He pointed out that they were thus unable to broadcast adult education programs to workers who could listen only at night. This situation is, of course, an inheritance from the days when colleges valued radio facilities less than they now tend to and when private operators were snatching at every available scrap of time. It is only fair to point out that even now a number of educational stations would be embarrassed if given more time. Some do not fill well the time they have. However, of the leaders this is not true. They want the time and are capable of using it. Moreover, they especially want more evening time.

Yet, in contrast with their definite handicaps, the educational stations have compensating advantages. Their financial plight

is not quite so bad as it seems. I talked with the manager of one station whose annual budget was \$3,500. On this a daily program of from six to eight hours was being maintained. "I suppose our actual budget is several times what we officially receive," he confessed. "While I spend most of my time on the station, I supervise college publicity also. My salary is paid by the extension division. We have no rent to meet, of course, and our electric bill is never presented. We receive invaluable assistance from some members of the faculty, and we can get all the student volunteers we can use about the station for the asking. Recently we decided to train several Freshmen for radio work (we want students who will be with us a while) and posted an announcement. Eighty-three candidates appeared."

Such compensatory advantages indicate why college stations have been able to exist on almost microscopic budgets. But the university offers broadcasting talent as well, from both the student body and the faculty. There is usually a group of student players who will work up dramas under the supervision of the station staff. In the schools of music at universities like Kansas and Wisconsin there are talented young musicians and singers who can be used judiciously, and the music instructors themselves will perform. The departments of agriculture have on their staffs experts whom the farmers of the state are eager to hear. Almost every department can make its contribution. Usually the speech departments, most of which were beginning to languish before the coming of radio, are helpful with voice training. Courses in radio script writing, in radio speech, and in the practice of radio are given at most colleges where there is a station. Ohio State now has twelve! Out of such work some promising talent is secured. Then there are college glee clubs

and choral groups and the college debates and athletic contests to broadcast. Finally, a number of educational stations are acting as centers for encouraging broadcasts by outstanding high school glee clubs and bands. Where resources like the above are intelligently used, they can be of considerable value.<sup>2</sup>

For many listeners the fact that educational stations broadcast little or no advertising is a recommendation. "When I have my radio tuned in on your station," a housewife told a station manager, "I know I am not going to have to run downstairs to turn it off because it's so bad I can't stand it." Commercial radio officials often argue that people like advertising; perhaps some of them do. Others know nothing else and take the sales talks for granted. Others actually dislike it. Of 1,075 cases covered by a questionnaire reported by Cantril and Allport, two per cent thought advertising should be given more time on the radio, forty-one per cent thought it should have the same time it then had, forty-seven per cent thought it should have less time, and ten per cent wanted no advertising at all.<sup>3</sup>

Finally, the publicly operated station has an appeal to many listeners because they feel that it is their own. If the station manifests a spirit of public service, the radio audience responds and is receptive toward college broadcasts. And the educational station is free to do just that, and, in general, takes pride in doing it. Men like McCarty and Engel at Wisconsin, Wright at Illinois, Griffith at Ames, Umberger at Kansas, Powell at Florida, Roberts at Corvallis, and Dammon at Purdue have an intense

<sup>2</sup> The United States Office of Education has recently issued a list of eighty-three colleges and universities in which courses in radio are now offered.

<sup>3</sup> *The Psychology of Radio*, by Hadley Cantril and Gordon W. Allport, Harpers, 1935, p. 102.



conviction of the importance of their work. "The university radio director's first job," declares Mr. McCarty, "is to grasp and hold fast to an ideal of unselfish public service, a radio service not possible where the chief and often the sole objective is private gain." This sums up the attitude of the leaders among the educational stations, and many of them show an abounding energy in practising what they preach. They have specialized in serving particular group interests and the general interest, and they have a distinct advantage in being able to devote any time and as much time to these public purposes as is necessary.

How well do the educational stations use their resources? Only a mixed answer can be made to that question. I have heard excellent broadcasting at Wisconsin, Kansas, and other stations. In some cases I could not ask for greater professional proficiency. At other stations I heard some poor broadcasting. A few programs were literally wretched in quality. Usually these were accompanied by others which showed that the program as a whole had its good spots. But where the staff was small and made up to a considerable extent of student help, it could not give attention to rehearsals and prereadings. "Some days I feel lucky to have the program filled," sighed one overworked manager. Stations that are forced to accept what they must from campus volunteers and can not afford time for correcting poor speech, that can not tactfully advise faculty members as to subject matter and the art of presentation, or hear rehearsals of drama or music, necessarily produce results that compare sadly with network programs representing eight hours of rehearsal by professional actors, or even with the local programs of average commercial stations. Most of the college stations, indeed, do better than might be expected. Some of them have regularly supplied

commercial stations with announcers and script writers, which indicates that they have more than promise.

The chief need of the struggling educational broadcasters is more money. However, larger budgets depend upon expanding financial resources among states or colleges, and on the presidents of institutions recognizing the potential value of their stations and fighting for them. The chief needs of the better stations are more power and more time. With these resources, and a moderate increase in funds, a dozen of them could render twice the service that they do and make it much better service.

There is of course no question of the desire of the educational stations to serve education. On the other hand, there is some question of how much they do to serve it. Quantitatively they do more than the commercial stations, although I do not doubt that some commercial stations could prove that they broadcast enough cultural and educational programs to compare favorably with some college stations. On the average, the element of serious entertainment in programs broadcast by universities would probably run half again or twice as much as that in the programs of the private stations. Programs sent from the campuses have the same defects as those sent from other places. The educational broadcaster and the commercial broadcaster agree pretty well as to the faults of teachers using the radio. They have essentially the same difficulty in correcting these faults. Until the level of educational material in general is raised, the presentation of a larger amount of education by college stations will be now an asset, now a liability.

The managers of broadcasting at universities are hopeful that the quality of their programs will be improved. With returning prosperity and growing recognition of their importance by their

presidents and faculties, they expect to have larger budgets. They hope to get better frequencies from the Federal Communications Commission and increasing allotments of time. A number of them can point to steady progress. They believe their future holds a further expansion of activities and a distinct betterment in the character of their work.

Whatever may be proved by the event, it would be foolish to underestimate the importance of this small but active group of broadcasters. It is true that many of them today compare with the larger commercials as small boys playing football in a town lot might with an all-American team. Yet the small boys will grow up, and the educational stations in a similar fashion are likely to gather greater power and skill. They have not yet had a full opportunity, even at stations like WHA, to show what they can do. Meanwhile, their very difference from the mass of American stations is significant. They are dedicated to service wholly; commercial stations attempt to harmonize service and the profit incentive. If eventually there is an irreconcilable conflict between profit and service, we may turn to our educational stations with a new interest. For the present, they are important factors in educational work, as we shall see in reviewing the more notable accomplishments in teaching by microphone.

## Forays in Cooperation

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THE formation of the Federal Radio Education Committee early in 1935 was followed by a common impulse toward cooperation on the part of both educational leaders and broadcasting officials.

"Educational broadcasting," announced Commissioner John W. Studebaker, Chairman of the Committee, to a radio conference in 1936, "requires that we pool our knowledge of educational purposes and of planned instruction with the practical experiences of broadcasters schooled in the technical complexities of radio."

David Sarnoff, President of the Radio Corporation of America, on the same occasion professed himself "a keenly interested, willing listener and worker" in educational effort by radio. "The ultimate aims of educators and broadcasters are identical in this," he declared, "that they desire to see American standards of education and culture raised to the highest possible level."

Naturally, such opinion was fully supported by the moderates among educators. And even the National Committee on Education by Radio abandoned its earlier position. Under new officers it proposed that educators give the industry an adequate opportunity to show what it would do.

Good words were matched with action from the start. In the

past two years there has been a quickening of educational activity in commercial stations everywhere, and certain definite experiments have been undertaken jointly by educators and broadcasters.

But before examining education by radio in the act, it will be well to consider the relationship of adult education by microphone, our particular concern, to education on the air in general. We need not pause long for this. The first fact which an inquiring reporter discovers about educational broadcasts is that all of them are listened to by great numbers of adults. With the exception of programs prepared for schools, one may say categorically that the majority of listeners are men and women. Women naturally make up the bulk of audiences in the day hours; men and women comprise them almost exclusively at night. Even educational programs like WHA's College of the Air and WOSU's Radio Junior College find most of their hearers among those who are no longer at school. Furthermore, in the case of broadcasts directed at grammar and high schools there is a large audience of interested parents and other adults. The American School of the Air was ranked tenth in popularity among all radio programs by the housewives of Syracuse, New York. Its adult audience equals or may even surpass its school audience. In Cleveland and Rochester I was told that parents listened in large numbers to grammar school broadcasts and wrote frequent letters about them. Thus, the greater part of all educational radio is out-and-out adult education, and even programs aimed at school children are heard by adult audiences. I shall, therefore, take some account of everything on the air that is educational, although I shall consider most programs for schools as having a suggestive rather than positive value for this study.

We may now turn to the recent work of educators and broadcasters. First let us consider that done by individual stations throughout the country.

We have seen that educational broadcasting has been going on to a varying extent since the middle 1920's. We have perceived that it has been represented by two types, one that might be called perfunctory, and another that comprised a sincere and active cooperation by educators and broadcasters and could be called creative. To cover in detail the innumerable examples of either type would take volumes, and there is little point in rehearsing the dull broadcasts done by "pressure groups," or by educators who drag themselves to the microphone to do a chore. Of no greater interest are innumerable performances where the educator is willing, but inept and inexperienced, and gets no help from the indifferent station executive.

It is broadcasts carefully planned, well written, well rehearsed, and well produced that justly engage our interest, and fortunately these have grown in number during recent years. Yet again we can give small space to them. The work of an N.B.C. station in Denver, KOA, with the Board of Education and the public library of that city would require this entire section if it were to be described adequately. But in the engaging discussion program, *Too Young to Vote*, put on at KOA by students of the junior and senior high schools, and in the library's *Once upon a Time* broadcast about books, work has been done which has represented a pooling of resources by the station and the educators and seems to please both them and the public.

Station WHAM in Rochester, New York, also has cooperated successfully with the schools and public library. Here both the script writing (some of it done by a teacher with experience at the New York University Radio Workshop) and the use of

dramatization have been of high character. I was particularly interested in the artistic quality of the intermediate and high school broadcasts, and in a library program which used dramatic "spots" in talks on books and authors.

In California, the program evolved by the state university at Berkeley for Station KGO in San Francisco and the N.B.C. stations on the Pacific coast has won a definite audience. In this, The University Explorer, a new way of dealing with education has been evolved by having an able commentator report on the outstanding accomplishments of the various university departments.

Similarly, one might note in Boston the finely conceived series of lectures on art which the Colonial Network has put on through the efforts of the Museum of Fine Arts. Or one could observe the Massachusetts Library Association's experiment over Station WEEI, Meet the Author, in which the radio listeners are able to do just that.

Of a wholly different type are many of the programs put on by Edgar Bill's station at Peoria, Illinois, WMBD, where the emphasis is placed on serving the interests of community organizations, and where a liveliness and sincerity often carry these efforts into distinction. In Baltimore, John Elmer of Station WCBM, although working against active competition with limited power (250 watts), has done notable work in serving foreign language groups, religious bodies, and civic organizations.

The outstanding example in quality which I found among programs put on by a single station in cooperation with an educator is perhaps exceptional. For Meredith Page, although representing Ohio State University, has had an extensive pro-

fessional experience in broadcasting. His *Men Who Made America*, produced by Station WLW in Cincinnati, represents something like an ideal for educators and broadcasters. In such biographical studies as *The Prairie Sage*, a program presenting the life of William Allen White, Page has done both a distinguished radio drama and a piece of definite pioneering in American biography. Employing amateur actors from a Cincinnati dramatic school and receiving meticulous help in production from WLW, he soon won such attention for his programs that they became a feature of an N.B.C. network.

Wherever work in education achieved a notable character, I found two factors present. One was the willingness of the educator to learn something of the art of radio. The other was the realization by the broadcaster that his job was not merely to "open his facilities," but to give energetic help wherever it was needed—in the planning of programs, in their writing, in the training of those appearing on them, and in the details of production.

Unquestionably, the broadcaster's contribution is more necessary to success than the educator's. If he seeks earnestly, a station manager can usually find a teacher, librarian, or professional worker of standing who has the capacity to do a creative job. Then step by step the manager can guide and assist whatever project is developed. "We can't wait for educators to come in," declared one program manager in the West. "We have to go out and catch our bird, and he must be the right bird. Once we have him, success is only a question of intelligent and sustained effort."

As such commercial broadcasters multiply and as the educational groups give them cooperation, local and regional pro-



grams attempting education by radio are bound to improve throughout the country. Unfortunately, the combination necessary for distinction is still far too rare.

One promising activity of commercial stations has been that of cooperating with colleges and universities who develop groups of programs. Usually these colleges have their own studios, a radio manager, and sometimes a radio workshop and courses in radio.

In the case of Cornell University, the college actually holds a radio frequency, but leases it to a commercial station, reserving time for its own purposes. Cornell uses several hours a day, chiefly for broadcasts of agricultural information. This activity is part of an agricultural service furnished by a number of New York State institutions and broadcast from nineteen stations.

Syracuse University does not possess a frequency, but through the courtesy of Station WSYR (N.B.C.) it uses call letters to identify its programs. These are put on the air by the two commercial stations of Syracuse. At first using ten hours a week, the university's radio manager, Kenneth Bartlett, finally reduced the time to about four, following the principle that the University would broadcast only when it had something of value to give. There is thus no undue burden on the University, and it has been able to work amicably and successfully with the Syracuse stations. Mr. Bartlett believes that the Syracuse plan is the ideal one for many educational institutions.

Both the University of Michigan and the University of Kentucky cooperate in a similar fashion with nearby radio stations, and maintain schedules considerably more extensive. Under Waldo Abbott, the University of Michigan broadcasts from WJR, Detroit. It started the Maddy Band Lessons. The Univer-

sity of Kentucky broadcasts farm talks, talks on state government by state officers, and programs of music, history, and other subject material. It has a radio director and its own studios and uses the facilities of Station WHAS in Louisville. The University of Louisiana, Connecticut State College, and other institutions have effected similar arrangements with commercial broadcasters.

Individual stations have also made progress in recent years with the production of educational and semi-educational programs which they develop themselves. These vary from health talks and the dramatization of the history of specific communities to the development of intensive programs of classical music, with commentary and printed "aids" distributed on request. Typical of the first kind is the sponsored program, *The Land We Live In*, broadcast by KMOX (C.B.S.) in St. Louis. The broadcasts under this series title take such themes as the beginnings of American occupation following the Louisiana Purchase, or the early days of Mark Twain as a pilot on the Mississippi, and relate them to the present life of the region. They are ably written by a station script writer and spiritedly dramatized by a group of professional actors. KOA's Denver program, *Light on the West*, uses comparable background material and so does Station WOAI at San Antonio, Texas, in its series, *Texas Treasures*. In Detroit, Station WWJ has put on a sponsored program featuring a professor in the University of Detroit Speech Department who covers in quiz form the past and present of the city.

In the field of music, certain activities have been notable. Arthur S. Garbett, Educational Director of the Pacific Coast Division of the National Broadcasting Company, has for some

years played an important part in developing broadcasts both to the schools and to adult audiences. These programs have been sponsored by the Standard Oil Company of California, which does no advertising in connection with them except to announce its responsibility for their presentation. The school programs cover a course designed under an advisory board of public school officials and music teachers representing the three Pacific Coast states. They comprise a detailed course in musical information and appreciation. They go out from six stations and serve 3,000 schools and 325,000 children in addition to the adults who listen in. The evening broadcasts consist of orchestral selections by the San Francisco Symphony Orchestra covering an hour period.

In Los Angeles, the independent station, KECA, was not doing well during the depression. Its director, José Rodríguez, was a musician of reputation and persuaded the owner to try the effect of broadcasting a strong program of good music. A collection of the best records, European and American, was made over a period of four years; altogether some 40,000 were accumulated. They were used intensively, and were implemented with attractive booklets giving interpretations of the programs and biographies of the composers. A fan mail running as high as 14,000 letters a week proved the appreciation of a large number of hearers.

Advertisers were secured for the support of the programs. But, unfortunately, the lovers of classical music did not show their appreciation by patronizing the sponsors. As Mr. Rodríguez put it, "The people who hear Bing Crosby will buy, but those who listen to Beethoven will not." The acquisition of the station by N.B.C. cut down the amount of musical broadcasts

but improved the financial affairs of KECA. However, a strong quota of classical music programs is still maintained, sometimes covering several hours a day. Contrary to the usual commercial custom, they run from nine o'clock to eleven o'clock in the evening. Both Rodriguez' and Garbett's experiments were begun before the formation of the Federal Radio Education Committee, but they stand as present-day activities developed by individual commercial stations.

An experiment somewhat similar to that of KECA in Los Angeles was begun in New York in 1934. John Hogan, a radio engineer who had developed high fidelity transmission apparatus (which enables sounds of both a lower and a higher quality to be transmitted and improves the general accuracy of broadcasting), secured an experimental license in that year for a station, W<sub>2</sub>XR, at 1550 kc., at the extreme upper end of the broadcasting band. This frequency was then just above the area reserved for commercial use.

Mr. Hogan, a lover of good music, was particularly concerned with what his apparatus could do for it and curious as to the size of the audience that might gather for nothing but the best. Like Rodriguez, he collected an extensive library of the best recordings, European and American, and began putting them on the air. Soon he found that he had an amazingly large body of listeners. Sponsors offered themselves, and he accepted them under strict regulation as to the character of their advertising. The station applied to have its license made commercial; the application was granted and its name was changed from W<sub>2</sub>XR to WQXR. (A number in call letters signifies an experimental station). A few features—news and discussion—were added to vary the program, and arrangements were made to broadcast

“live” music, such as the symphony programs of the Women’s Orchestra and certain Town Hall concerts. The station broadcasts music eighty per cent of the time and practically all its material is educational or semi-educational.

It is now paying expenses. The staff attributes its success to the character of the material and the method of presentation; in 1936 *Variety* gave WQXR third place in “showmanship” among New York stations. “The virtue of our programs,” said Elliott Sanger, the general manager, “is that our audiences are being painlessly educated!” But only in large centers do Hogan and Sanger believe that a station specializing in broadcasts of good music can maintain itself commercially. They hope for a network covering New York, Boston, Philadelphia, and Washington, but as yet this is a dream.

In addition to musical programs like the foregoing, which could be supplemented by a considerable list, including Station WOR’s Sinfonietta and other offerings (which antedate its membership in the Mutual Network), there are serious programs dealing with literature and other material which have been developed by individual broadcasters. One of the earliest of these was the poetry program on WOR initiated by A. M. Sullivan, himself a poet, some years ago. It features guest poets reading from their own work and entering into discussions related to it. WHN has recently started a poetry program for poets less well known. The most interesting of nonmusical but seriously cultural programs which I found developed by an individual station’s own staff is White Fires, which takes the air from the C.B.S. station, KNX, in Los Angeles.

This 50,000-watt station was acquired by the Columbia network only recently and will be the center of its coast activities.

In rebuilding the program, D. W. Thornburgh, the station manager, decided that it would be an interesting experiment to develop a quality program for the later evening hours, when other stations were busy playing dance music. Some people might not wish to dance. The station staff developed, and now regularly writes and directs, a dramatic program dealing with literature. It takes a crucial moment in the life of a great writer, usually a poet, as the center of a half-hour episode and utilizes some work of the author which was associated with that moment, weaving this into the drama as a recitative combined with music. The cumulative effect is often impressive. The Ballad of Reading Gaol was used in this fashion in a drama showing how Oscar Wilde, as a prisoner at Reading, found a new soul. White Fires now goes over the Columbia network in the West as a sustaining feature. One could wish that more stations had the will and the resources to attempt comparable work.

Fortunately and unfortunately, many broadcasters rely almost solely upon the networks for original programs of a serious character: fortunately, because the networks have the resources for making admirable programs; unfortunately, because one would like to see creative effort active in various American communities instead of being centered in New York, Chicago, and occasionally another city. But in any case, the sustaining programs developed by the networks in recent years is one evidence that they are taking education and culture with an increasing seriousness.

Many network features of an educational character were, of course, already established by 1935. N.B.C. maintained its Music Appreciation Hour, the Metropolitan Opera, a number of the NACRE programs, the National Farm and Home Hour,

the University of Chicago Round Table, and many other musical and nonmusical attractions. Columbia could point to the American School of the Air, certain of the NACRE programs, to operatic and symphonic broadcasts, and to many broadcasts on public questions. However, in the following two years both these networks were to show increasing activity and the new national network, the Mutual, was to follow in their steps.

In April, 1935, N.B.C. added a highly significant program dealing with politics, economics, and sociology in America's Town Meeting of the Air. On December 30, 1936, it supplemented its opera broadcasts by Tales from the Opera, a Wednesday evening program descriptive of the forthcoming Saturday's production. After a period of trial over Station WJL, Detroit, Maddy's Band Lessons also became a network feature late in 1936. The N.B.C. Home Symphony, a program permitting hundreds of thousands of people to play with an orchestra in their own homes, is likewise a recent N.B.C. network feature. Since this program began, the N.B.C. offices have sold 240,000 orchestra parts to radio listeners. The juvenile forum, Raising Your Parents, was initiated in October of that year. N.B.C. has provided shorter series of educational programs, such as the five broadcasts, A Trip to Our National Parks, which began late in April, and its six Shakespearean programs of forty-five minutes each starting in June, 1937.

The Columbia Broadcasting System had also maintained numerous educational programs such as Science Service, the broadcasts of the New York Academy of Medicine, the Columbia Public Affairs Institute, and the broadcasts of the National Student Federation. It had offered many individual series dealing with such subjects as science, architecture, literature, and inter-

national affairs. But in the past year its activities have been broadened and intensified by the establishment of some particularly notable features. One of its most interesting contributions has been Everybody's Music, a program devoted to orchestral renderings under the leadership of Howard Barlow. For this feature a number of American composers are writing original work with particular attention to the radio. The first of these, Lenox Avenue by William Grant Still, was broadcast on May 23, 1937.

Another sustaining program which has been finely worked out is Living Dramas of the Bible. These broadcasts are renditions in dramatic form of stories from the scriptures. Novelists, dramatists, and short-story writers have composed many of the scripts. Another feature initiated in 1937 has been Carl Carmer's programs of regional American folklore. The Columbia Workshop, to be discussed in more detail later, has been a significant experiment. Finally, in the spring of 1937, Columbia took the lead in the recent Shakespearian revival, announcing a series of eight hour broadcasts, presenting eight individual plays.

Other features of a semi-educational character have been produced by both networks. The above represent only such broadcasts as have been developed with little or no active cooperation from educational associations and are essentially the work of the networks themselves. Perhaps the Town Meeting of the Air would not justly fall in this category, as the idea was brought to the network by George V. Denny, Jr., of the Town Hall in New York, and the program is under the auspices of the League for Political Education. Yet N.B.C. developed the technique of the program and has maintained the staff necessary to its continued success.



In these years there has been a very definite cooperation between both the networks and groups of stations on the one hand, and important bodies of educators on the other. This has taken several forms.

One of the most interesting of recent cooperative efforts has been that carried on by the University Broadcasting Council of Chicago. In 1934, university professors from several institutions in the Chicago area had been broadcasting for nearby commercial stations. Allen Miller, a young instructor at the University of Chicago, felt that this activity was unsatisfactory. He perceived in it a lack of coordination and adequate preparation on the part of faculty members. There seemed also to be a lack of interest and assistance on the part of the broadcasters concerned. With five 50,000-watt stations, three important universities, and a number of smaller stations, the city and the surrounding region did not seem to be getting the service they should receive. Why not pool these resources?

The idea was developed. It was taken to the Rockefeller Foundation and the Carnegie Corporation of New York and discussed by various educators and the heads of the broadcasting establishments. Finally, an organization was established with Miller as director. Seven stations, three universities (Chicago, DePaul, and Northwestern), and the foundations became contributing members. The budget called for \$55,000 a year, \$13,000 to be contributed by the universities, \$16,500 by the stations, and \$25,500 by the two foundations. The arrangement was to be tried for a period of four years. The Council's staff would develop the programs, using chiefly faculty members for broadcasting, but trained actors, when necessary, for

dramatized programs. The universities would also advise as to sources of material and the correctness of such scripts as they did not present themselves. The stations would discuss ideas and judge from these or from scripts or rehearsals as to which programs they wished to produce. The universities would gain in reputation through the programs; the stations would be supplied with sustaining features of a high character at a moderate cost.

The Council already had one program to direct in the University of Chicago Round Table. It set about the task of developing others. With a manager, a production director, script writers, and several technicians it created a little producing laboratory of its own. From this came such programs as *Science in the News*, *The Old Judge*, *Titans of Science* (later changed to *Men of Destiny*), *This Friendly Earth*, *The Government and Your Money*, and *The Voice of Science*. With the spring of 1937 the Council was carrying from twelve to thirty hours of programs over the seven stations it served.

In 1935, while this important experiment was just getting under way, the Office of Education proposed to the Administration that a project in radio education be financed with emergency funds. Specific plans were presented, and on December 20, 1935, \$70,000 was allocated for the work. (In September, 1936, a second appropriation, this time for \$130,000, was made to carry forward the project until July, 1937.) Commissioner Studebaker promptly assembled a staff of workers: a few professionals of recognized talent from the commercial broadcasting field; and singers, actors, and a clerical force from the Works Progress Administration and the Civilian Conservation Corps. William D. Boutwell of the Office of Education was

made director. He was assisted by advisory committees of educators and scientists separately constituted for the various programs. These committees have been active not only in consultation but also in following the scripts up to the point of production.

The National Broadcasting Company and the Columbia Broadcasting System showed an immediate interest in the project. N.B.C. accepted the first program, offering it to one of the Company's networks as a sustaining feature. Eventually, it joined in producing four. Columbia followed soon and has been associated with three programs. The seven programs have been: Have You Heard?, Answer Me This, Education in the News, The World is Yours, Safety Musketeers, Treasures Next Door, and Let Freedom Ring. In time and services N.B.C. and C.B.S. contributed approximately \$750,000 and \$250,000, respectively.

In addition to programs sent over the networks, the Office of Education developed a series, Interviews with the Past, which was made available to smaller commercial stations, educational stations, and schools and amateur groups wishing to have material of a professional quality for study or for actual use on the air.

The public response to almost all these programs was impressive. Offers of supplementary material brought in a tremendous volume of mail. In the year after the launching of the first program more than 366,000 letters were received. A survey of 10,000 listeners to The World is Yours (N.B.C.) made by the Radio Project office showed that these comprised students in schools and colleges (2,273), professional men and women (1,651), skilled and unskilled workers (1,156), and clerks, farmers, social

workers, invalids, and many others. It is estimated by the Radio Project that this program alone has an audience of 1,000,000 persons. There seems to be no doubt that large groups of American radio listeners want to hear programs with an educational content when these are so developed as to command their interest.

Such major experiments of organized educators with the networks have not been substituted for the cooperation between the radio "chains" and important organizations, or between individual stations and such bodies. Rather, such activity has increased in the last several years, and more care and thought have been put into the character of the programs presented. Here the broadcasters have cooperated with the bodies they have served, such as the National Congress of Parents and Teachers, the General Federation of Women's Clubs, the American Medical Association, the American Historical Association, the American Legion, and the National Education Association. Station WLW of Cincinnati has lent its facilities to the Ohio School of the Air, a series of programs under the state department of education. All such organizations have facilities for assembling groups of listeners and for following up such interest as may be expressed. All have shown a tendency to treat their radio time as opportunity to give information about aspects of American life in which they are interested. A full list of state, regional, and national bodies that have cooperated with commercial stations in individual broadcasts or in regular series would require pages.

In surveying the activities of a cooperative character between stations and educators, one should note the active work of the

educational stations. On the whole, their resources for production have not been comparable with those of the networks, the Office of Education, the University Broadcasting Council, or some of the national organizations of an educational or semi-educational nature that have appeared regularly on the air. But many of them by industry and resourcefulness have supplied much of what could not be supplied by money. The Florida School of the Air, the Wisconsin School of the Air, the Wisconsin College of the Air, the Ohio State Radio Junior College, the Oregon School of the Air, and the Michigan State College of the Air have all offered varied programs. These range from agriculture to vocational education, from language lessons to government, from Shakespeare to musical appreciation. Regular broadcasts outside such "colleges" have also covered a variety of subjects: books, informational service to farmers and housewives, dramatizations of history and literature, music, expositions of government (Wisconsin runs programs both for office holders at the capitol who wish to talk on their work and for candidates of all parties), art appreciation, geography, and health. Numerous state organizations use the educational stations. WOSU gave time on the air in 1935-36 to forty-six Ohio bodies of standing and to many others outside the state. Many of the stations are particularly strong in their agricultural service, and perhaps a majority of the educational broadcasters have 4-H club programs on Saturdays. Broadcasts to special groups, which we shall consider more particularly later, have been a feature of college station work.

Thus the last two years have seen a tremendous activity by both educators and broadcasters. To make even a superficial

study of it is to be impressed with its variety and amount. But mere lists of accomplishments are deceptive. That much has been done means for certainty neither that the right things were done nor that what was accomplished, however heartening, represented more than a partial answer to existing needs. We can get a sense of some respects in which educational radio has been fumbling or poor by turning to a much smaller yet highly significant activity in the field of education by radio.

## Mysteries of Radio

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I do not yet see an answer to the educational problem," said a network official recently, in confidential conversation. "It will not be found, in my opinion, until the necessary research has been done."

He then told how, early in 1935, on learning of the Federal Radio Project and its \$70,000 grant, he had hastened to Washington and begged John W. Studebaker, United States Commissioner of Education, to abandon his scheme of broadcasting educational programs for the general radio audience. He urged him instead to organize listening groups in Civilian Conservation Corps camps, try out a number of programs on the human specimens in this educational laboratory, and thus investigate what happens in the interplay of broadcast and listener. Commissioner Studebaker listened to this plea, but did not adopt the plan which it presented.

"I believe if he had," declared the network official, "he would have achieved impressive and influential results. As it is, after more than a year of programs—and he has put on some pretty good programs—he is right where he started!"

However just this may be as an appraisal of the Federal Radio Project, it presents another aspect of educational broadcasting. Radio is full of mysteries and things half known. Educators and broadcasters alike are teased and agitated by them. Many of the

programs which we have described have attempted to clarify these unknowns and half-knowns by experimentation, but there has also been a demand for frontal attacks upon them. So while educational broadcasts have been in process, research activities and experiments have also been launched. Some of these represent much thought, effort, and financial outlay.

The greatest mystery of radio is the radio audience. William D. Boutwell, Director of the Federal Radio Project, recently suggested its character in a humorous definition of broadcasting as it might appear to a man from Mars: "It is like trying to catch and hold the attention of a million blind persons, each of whom is occupied with something else at the time."

Commercial stations, agencies working for advertisers, public-spirited organizations, and inquiring educators have all been trying, like photographers pointing their telescope lenses from ambush on wild animals in Africa, to catch the physical and mental processes of the radio listener. It has been a baffling activity.

"Fan mail" was long the sole evidence of what listeners felt. It was watched with an almost fearful respect. It is still considered an important evidence. But, by offering "bait" (a free booklet, a photograph, a token, a prize), listeners can easily be stimulated to write letters. "I can shoot my mail up to 10,000 items a week or drop it to 500," declared Morse Salisbury, Director of the Department of Agriculture's National Farm and Home Hour, "and the program drawing 500 responses may be as good as the one that draws 10,000." So mail is now considered by most broadcasters to be only a contributory indication of listener feeling. They have devices more highly regarded for plumbing the mystery of the audience.

One is the telephone survey. In carrying out this test, several



dozen tactful workers make a number of 'phone calls intended to "sample" a city or district. The calls are distributed evenly over the territory to be surveyed. The telephone subscribers are asked what programs they are hearing at the time or what programs they have heard in the past day or week, according to the plan of the survey. The results give an indication of preference on the part of what is probably a representative number of listeners.

Another method of inquiry is the personal interview. Here, too, there may be an attempt to take a census of what has been happening within a few hours or during the past day or week. Or arrangements may be made with a member of the household to keep a record of the programs heard for a prescribed period. A fuller record can usually be made by this type of interview, but less ground is covered in a limited amount of time than by the telephone survey.

Finally, electric meters have been devised which record the exact periods during which the radio is in action and indicate the particular station which is being heard at any time. Owners of receiving sets have been persuaded to install these meters, the maker of the survey overhauling and repairing the set in return, or paying a small sum for the cost of the electricity the meter requires, or doing both. This type of survey has its limitations, for obviously a radio may be in action without anyone's listening to it, or the listeners may be inattentive to the program. But the meter survey can be supplemented by personal interview.

Such devices have been used chiefly to show advertisers the approximate size of the audiences that listen to their programs or to prove the popularity of certain stations. Obviously, they

contribute little to a knowledge of listener psychology. Even with respect to preferences of listeners, they report concerning a limited number of offerings only.

Still, valuable data have been gathered by these processes. The Columbia Broadcasting System in 1933 arranged to have nation-wide surveys made under the direction of Daniel Starch, formerly of Harvard and now an independent research consultant. These surveys covered a period of three years and represented personal interviews with about one hundred and sixty thousand heads of radio households in one hundred and fifty-two American towns and cities in all sections of the country. Professor Starch's work was supplemented with other studies, such as a meter survey to check the hours of daily listening, made in the City of Boston by Robert F. Elder of the Massachusetts Institute of Technology. The entire experiment seems to give accurate figures as to radio ownership in different sections of the country, the average number of hours spent by families in radio listening, the age and sex of radio listeners at different periods of the day, the increase of listening from day to day, etc. Such facts as that 76.4 per cent or 18,718,000 of the 24,500,000 radio families in the United States listen daily, that the average listening time is 5.1 hours per family, that people at all income levels listen to about the same extent (from 73.3 per cent to 77.4 per cent, with the higher income groups listening least and those of middle income most) give an important groundwork for more detailed knowledge.

Efforts have also been made to get this fuller information. The Cooperative Analysis of Broadcasting, founded by Archibald M. Crossley in 1929, is a committee of advertisers and advertising agencies which make surveys for their own information. (Cross-

ley, Inc. furnishes service for this organization, and makes other researches independently.) Their findings are confidential; but they are known to show that with the most popular programs there has been a rather rapid shifting of audiences from one to another, while serious programs have a steadier drawing power. Moreover, the Crossley researches (both those of C.A.B. and of Crossley, Inc.) reveal a constant growth in popular appreciation of "good" programs, such as classical music, and in certain types of education. This has been marked in the case of "participating" programs—like forums, spelling bees, and quizzes. However, the present popularity of such broadcasts may be temporary.

An intensive survey made by Allen Miller (later of the University Broadcasting Council) in Chicago in 1934 substantiates these very general findings. Mr. Miller had questionnaires distributed to 5,200 homes among all income levels. He received 1,500 replies. He asked that preferences be indicated among a classified group of programs—religion, news, educational courses, popular songs, and so forth—the listener ranking five or six choices by number. He found news most popular for people of all ages and incomes and discovered that there was a greater liking for cultural programs as the age of the listener increased. Classical music was actually preferred to popular music by those more than thirty-four years of age. Surprisingly, this seemed to indicate that a sponsor who wished to reach the majority of responsible purchasers might do better for himself by presenting a broadcast of symphony selections rather than one of jazz favorites.<sup>1</sup>

<sup>1</sup> An interesting test of program choices, although made on a small scale, is described by Hadley Cantril and Gordon W. Allport in their volume, *The Psychology of Radio*, to which reference has already been made. A question-

It should be added that all surveys are likely to be "loaded" intentionally or unintentionally in some direction. The questions asked may be calculated to favor certain types of programs. As to questionnaires, they are somewhat unreliable in that for every listener who completes one there are likely to be several asked to do so who do not respond. The act of completing probably indicates the prevalence of certain interests; persons interested in good music and education are probably more likely to respond than those merely interested in entertainment. However, all surveys present definite material, and when due allowance is made for error and the character of the questions asked, the figures which they offer constitute a tremendous advance over mere guesses.

In "A Memorandum on the Current Broadcasting of Serious Music" the Columbia Broadcasting System makes some rather surprising announcements with regard to programs like the Ford Sunday Evening Hour and the New York Philharmonic Orchestra's broadcasts. After reporting that the Crossley surveys show a growth in audience percentage for the Ford Hour from 7.8 in 1935 to 17 in 1937, the memorandum points out that the listen-

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naire was distributed among a number of listeners in urban and rural areas of the states of Massachusetts and New York. Answers were received from 1,075 persons. In the questionnaire forty-two types of programs were listed, and the listeners were asked to rank these in order of preference. The replies, classified by sex and age of listeners, showed considerable differences in the choices of young men, older men, young women, and older women. However, when all replies had been considered, the favorite types of programs in order of popularity were shown to be in the order given: old song favorites, dance orchestras, news events, symphonies, football, drama, humorists, sports, educational talks and talks on psychology, and operas and short stories. This result indicates both a strong interest in light music and more interest in good music, drama, and education than had usually been assumed to exist.

ers to this program are more numerous than those who hear Kate Smith, Jack Oakie, Gang Busters, Joe Penner, the March of Time, or the Gillette Community Sing. For the New York Philharmonic program, it has an even more favorable report. Surveys by Daniel Starch in ninety-one representative communities showed, according to Columbia, that 59.4 per cent of all radio homes had heard one or more of the Philharmonic broadcasts. The network, therefore, concludes that 32,000,000 listeners have at one time or another tuned in upon this offering. The percentage of hearers was largest among the higher incomes. The memorandum adds that the number of hours of serious music broadcast by Columbia has increased from 368 in 1933 to 523½ in 1936.

The research into the listener's habits and preferences still goes on. Several important undertakings are under way which may add to what we know about radio audiences. One organization that has done something in this field and intends to do more is the Radio Division of the Bureau of Educational Research at Ohio State University. This body, which is endowed by the Payne Fund and is under the general supervision of W. W. Charters and the immediate direction of I. Keith Tyler, seeks to bring together the chief organizations in Ohio which are interested in radio. It issues *The Radio Announcer*, a monthly bulletin, and *The News Letter*, and publishes service aids to amateurs. It cooperates with the Ohio School of the Air and the university station, WOSU. To date its listener research has not been intensive, but it has made a canvass of the popularity of various educational programs among 3,000 readers of *The Announcer*. As the Division succeeds in forming a union of state organizations working with radio, it hopes to cooperate

with them in more extensive experimentation. Meanwhile, it has gathered some interesting data on the use of radio in the schools which may have an indirect bearing upon adult education.

What may prove to be the most valuable investigation of listeners as related to educational programs has only recently been approved by the Federal Radio Education Committee. Since its formation early in 1935 this body has given out little information with regard to its work. But it has had sixteen subcommittees laboring on various phases of educational broadcasting, and these have now reported on projects to a central Committee of Six. It is understood that as a result of recommendations made in these reports eight fields of research have been selected for which it is proposed to devote \$249,000. Of this sum, the Carnegie Corporation of New York and the Rockefeller Foundation are expected to furnish \$151,000 and the industry \$98,000. One project deals with listening groups and another with the evaluation of programs by listeners. For these two \$84,000 has been allocated, \$69,000 to the latter study.

When such investigation has been completed, much more may be known as to the popular interest in education by radio. We should learn something of how attractive a finely conceived and presented educational broadcast may be as compared with a program of popular entertainment. Presumably, we may learn the relative "pull" of programs that merely stimulate and those which actually teach. We may know something—the listener will probably change in such respects—as to effective forms of presentation: lecture, talk, dialogue, debate, panel, forum, drama. At present, there is little but "fan mail" to indicate the feeling of listeners on such matters.

The human mystery is probably the greatest mystery in radio, but the radio spectrum is another. We have seen that at present the broadcasting band covers only that part of the spectrum which is represented by stations whose wave frequencies are from 550 to 1600 kc. per second. But we have seen also that while frequencies lower in the scale are preempted for radio services other than broadcasting (ships, airplanes, police, army signals, etc.), there are frequencies up to 30,000 kc. which are now usable, and that those up to 100,000 kc. (and engineers are now extending this to 200,000) soon promise to be. All of the spectrum comprising frequencies of more than 550 kc. has a potential interest for education by radio and represents a problem to anyone thoughtfully considering the future. Even the present broadcasting band is a problem, and there is no doubt that in time modifications, if not decisive alterations, may be made with regard to its use.

T. A. M. Craven, the Chief Engineer of the Federal Communications Commission, submitted a "preliminary report" in 1937 in which a number of possible changes looking toward a more scientific and intensive employment of facilities between the limits of 550 and 1600 kc. were suggested. Among these were a general increase in power on the part of stations, with the object of increasing the area of good service; a reduction in the number of "clear channels" to twenty-five; and an increase, under careful regulation as to situation and equipment, of the number of both high-power and low-power stations. Mr. Craven promised to make a number of supplementary reports in the future.

Irvin Stewart, now retired from the Federal Communications Commission, later made a tentative criticism of the allocation

of facilities in the broadcasting band which, if followed to its logical conclusions, might lead to much more drastic changes than Mr. Craven has suggested. Pointing out that "the person who has the largest stake in American broadcasting is the listener," Mr. Stewart called attention to the fact that under present arrangements the advertiser rather than the audience was served. Advertisers find stations most useful where they will reach the greatest number of people, he pointed out. Therefore, in general, our cities are over-served and our rural territories badly served. "The result is a distribution of broadcast stations in the United States which no engineer would attempt to defend as an efficient way to deliver broadcasting service to the country as a whole." While clear channels were originally intended to give service to rural areas, forty-three of the forty-seven stations on the present forty clear channels are located in cities of 100,000 people or more!<sup>2</sup>

Such a condition reflects haphazard growth—or rather, hasty growth responsive to the importunities of men with particular interests to serve—and the situation is both complicated and difficult to change. To make drastic alterations with only an ideal social service in mind would create great disturbances in the radio business world. Furthermore, the technical factors involved are numerous and under constant process of modification. The matter of coverage illustrates this fact.

Coverage, as the word suggests, is the area within which the broadcasts of a given station can be heard with clearness and

<sup>2</sup> These data were given in an address, "The Public Control of Radio," by Irvin Stewart at Duke University, March 23, 1937. Mr. Stewart left the Federal Communications Commission on July 1, 1937, to become chairman of the Committee on Scientific Aids to Learning, a body organized by the National Research Council.



consistency. Originally, coverage was supposed to depend chiefly on power. However, C. M. Jansky, Jr., who has made many surveys to test the areas efficiently served by various transmitters, now reports that the factors which determine such service areas are four and that power is the least important of them! Geographical situation, position on the broadcasting band, and antenna efficiency are all, according to Mr. Jansky, more influential. For example, a station of 1,000 watts on a frequency of 1,000 kc. will cover effectively forty-three times the area in Texas that it can in New England! Again, a transmitter operating on a frequency of 1,500 kc. will need 75,000 watts to serve the same rural territory as one on a frequency of 550 kc. can serve with 1,000 watts!<sup>3</sup>

More examples might be given to show that revolutionary things could be done with the present broadcasting band; and we shall doubtless discover further possibilities than those we can recognize now. Yet, because of the many difficulties involved, it is probable that no drastic changes will be made for some time. For education by radio the possibilities of revolution will only become important if the character of broadcasting becomes wholly unsatisfactory. In that event, startling changes could be made. For example, should the people ever decide to create a chain of publicly operated stations for educational or other purposes and should this involve an arbitrary taking over of certain frequencies now privately held, many of the factors indicated above would probably play an important part in what

<sup>3</sup> "Engineering Considerations Fundamental to a Solution of Broadcast Station Coverage and Allocation Problems," by C. M. Jansky, Jr. In *Variety Radio Directory*, Vol. 1 (1937), pp. 763-72.

was done. Such a happening is, of course, only one of the many that might occur in radio if there seemed just occasion.

Such possibilities make commercial broadcasters shudder by day and dream nightmares by night. Representative Emanuel Celler's recent bill proposing a short-wave government station to be used only for international broadcasting aroused a rumor that ran about Washington with the speed of light and on to New York. This was the beginning, it was said, of a Federal chain of stations, probably in the regular broadcasting band! But such rumors are fantastic at present and will remain so if commercial broadcasting succeeds in harmonizing its desire for profit and its undoubted capacity to serve the public.

Outside the broadcasting band there remain the higher frequencies. These cover the range from 1,600 kc. to 100,000 or 200,000 kc. The frequencies between 1,600 to 30,000 kc. are spoken of as "short-wave" or "high-frequency," and those from 30,000 to 100,000 kc. and upward are known as "ultra-short-wave" or "ultra-high-frequency." Together, they cover facilities which mathematically represent from 98 to 200 areas the size of the present broadcasting band! Were these all usable to the same extent as the frequencies now employed by commercial and educational stations, we should be rich in broadcasting resources.

But they are not. As waves grow shorter they become less susceptible to constant and satisfactory control, and the "ultra highs" so greatly resemble light waves that physical objects affect them, producing "shadows." Even the short waves for a number of reasons are less dependable than those of the regular broadcasting band. Reception of them is often characterized by

fading and varies with the time of the day. Also, they "bounce" in such fashion that American broadcasts may be caught in Europe or even in New Zealand but not in portions of the United States fairly close to the transmitter. How to make the maximum use of these waves and the "ultra-highs" is still the busy concern of radio engineers.

The short-wave portion of the radio spectrum is already being used for a number of services. Aviation, forestry, and other government activities, as well as amateurs, international broadcasters, and experimenters with television and facsimile broadcasting, employ them. However, none of these groups has marked out a definite area for itself. Conflicts of interest seem inevitable, at least for a time. The demands of government services alone will be great. Television requires tremendous areas—a single transmission needs four times the sum of all the frequencies now employed by the broadcasting band! Yet educators are hoping that in the high and ultra-high frequencies there will be important facilities reserved for education.

Indeed, they have already asked for such facilities. On June 15, 1936, John W. Studebaker, United States Commissioner of Education, appeared before the Federal Communications Commission and requested "at least three and preferably four megacycles" (that is, three or four thousand kilocycles) in the short-wave area and an indefinite but generous share of the ultra-short wave areas. These proposed allotments were to be primarily for the use of the public school system of the United States. The ultra-high frequencies were considered by Commissioner Studebaker to be particularly suitable for broadcasting in local areas. Elsewhere, and at a later time, the Commissioner suggested the possibility of "several thousand" schools and col-

leges broadcasting, both on the present band and in the higher frequencies.<sup>4</sup> Chief Engineer Craven believes that the short-wave areas should be highly serviceable to education.<sup>5</sup>

The School Department of Cleveland, Ohio, has been the first to develop a plan for a short-wave system. It is now seeking authority from the Federal Communications Commission and assistance from foundations for this project.

Meanwhile certain experimental stations have used short-wave (not ultra-short) for educational broadcasting. The most notable of these has been Station W1XAL in Boston, Massachusetts. Established a few years ago by Walter Lemmon, a young radio engineer, the station operates on three frequencies, 6,040 kc. (6.04 mc.), 11,790 kc. (11.79 mc.), and 15,250 kc. (15.25 mc.). It takes no advertising and has been supported by subscribers organized as The World Wide Listeners' League and by funds contributed by the Rockefeller Foundation. Its transmitter has a power capacity of 20,000 watts.

W1XAL has specialized in the broadcasting of educational materials and has made several notable experiments with programs. One has been in the field of lectures. Working in cooperation with Brown University, Tufts College, Wellesley, Boston University, and Harvard, it has been able to secure a battalion of distinguished speakers.

Its broadcasts from Harvard classrooms have attracted particular attention. That Harvard should take to the air seemed

<sup>4</sup> "Radio in the Service of Education," by John W. Studebaker. *Proceedings, First National Conference on Educational Broadcasting* Washington, D. C., December 10-12, 1936.

<sup>5</sup> "Preliminary Engineering Report to the Broadcast Division of the Federal Communications Commission," January 11, 1937, p. 4. (Mimeographed.)

something of a revolution; that it should welcome a microphone into its classrooms and risk what was still a relatively novel and, in the past, a not very successful experiment created a stir among those watchful of broadcasting practice. The station's treatment of broadcasts from Harvard, as of its other college lectures, was individual. It imposed no split-second schedule upon the speakers. Some spoke for as long as an hour.

The programs seem to have been successful. They have covered a wide selection of subjects: Chaucer, American neutrality, astronomy, science, world politics.

Boston University has been quite as active as Harvard in using W1XAL. A notable course developed by this institution has been Building Literature, by John C. Scammel. Anyone who believes that radio talks should not last more than fifteen minutes should hear one of these lectures.

Besides its lecture program, W1XAL runs a regular feature, World Youth Speaks, a participating program directed by Carleton A. Wheeler of Tufts College. It also makes regular news broadcasts, broadcasts of symphonic and chamber music, and of the work of choral groups. It produces a number of actuality broadcasts, sometimes from a campus, sometimes from fishing boats and wharves. The station has done particularly interesting work in foreign language programs, German and Italian, the former particularly.

Finally, it has experimented in direct teaching. Two courses, one in radio and another in photography, have been directed to listeners who wish to learn actual practice. Fees are charged for material supplementary to the broadcasts, and there are paying groups which follow each course. More than 3,300 persons have written to signify their interest in the radio group.

All this activity has a special interest for two reasons. First, much of it has a foreign audience. While W<sub>1</sub>XAL can be heard regularly over the greater part of the Atlantic Seaboard and throughout the Middle West, it carries clearly to Europe when conditions are favorable and even to China and Australasia on occasion. Its programs are of particular interest to Americans abroad and foreigners interested in America. Again, it is a short-wave station and its accomplishments indicate the possibilities of educational broadcasting off the regular broadcast band.

Besides W<sub>1</sub>XAL there are many other stations in the short-wave area—W<sub>2</sub>XAD, W<sub>3</sub>XL, W<sub>3</sub>XAU, W<sub>9</sub>XBS, W<sub>4</sub>XB, W<sub>2</sub>XE, etc. Some are controlled by the commercial networks, some by independent stations, two by the General Electric Company, and one by the American Federation of Labor. Many of these stations merely relay programs of the networks or of individual commercial stations.<sup>6</sup>

Broadcasting has still other mysteries, and perhaps none more challenging than the problem of radio art and of radio apparatus and studio practice as they relate to this art.

The United States Office of Education, in its Federal Radio Project, has essayed to gather experience in the application of radio art-forms to educational broadcasting. Each of its seven programs has represented a different treatment of material. For example, in *Answer Me This* the dialogue quiz form was followed. *The World Is Yours* employed the framework of a museum guide and several visitors and some conversation with

<sup>6</sup> "Wired radio" is a method of program transmission which has great possibilities. It uses telephone wires or special wiring of its own and offers a choice of programs, just as regular broadcasting does. However, it employs frequencies from 20 to 100 kc. Wired radio systems have operated in some American communities.

museum specialists, all of which led to successive dramatic spots revealing the significance of exhibits in the Smithsonian Institution. In *Let Freedom Ring*, where it was necessary to cover long periods in describing the development of American rights, the voices of several announcers were used for introduction, transitions, and conclusion, and a choral group singing to original music by Rudolf Schramm, the music director of the project, was employed both to give variety and to intensify emotional appeal. *Treasures Next Door*, dealing with literature, employed an announcer to supply information and comment upon the book and author featured in each broadcast, and drama to present the story.

Practice revealed much of interest both with regard to artistic form and the handling of the material in the studio. The quiz program form was quickly imitated by commercial broadcasters—a sufficient testimonial to its value. With practice, the soundness of other techniques was indicated for the purposes to which they were applied. The combination of hortatory announcement and choral background eventually became particularly impressive in the case of *Let Freedom Ring*, although at first the effect was forced and broken. This program also demonstrated emphatically that in a series of broadcasts an experienced corps of workers is desirable. Writers, actors, and directors all profited as they became better acquainted with the spirit of their activity and with each other personally. But what the project showed most clearly as to the use of art-forms in educational work by radio was that many possibilities exist for varying the presentation of a broadcast and making it effective and that these can be dealt with flexibly and successfully if sufficient imagination and care are used in preparation.

Naturally, the pioneering of the directors of the Federal Radio Project differed only in scale and completeness from that done by many smaller groups of lesser resources throughout the country. Educational stations and commercial stations, little workshops and dramatic groups, have long been discovering possibilities in radio art. The University Broadcasting Council covered not a little of the same ground as the Federal Radio Project before the Project came into existence.

One of the most interesting experiments dedicated to exploring half-known areas in educational broadcasting has been the program, *Music and You*. This series of thirteen broadcasts attempted to reach that large body of listeners who have an interest in music but no special knowledge of it. The successive programs traced "the evolution of the art of music as we know it today." Each presentation took up an aspect of development: folk song, music in the church, early opera, early symphony, and so forth. Gradually, the listener was carried through the past into music of today.

The project was sponsored by the National Music League and financed by a grant from the Rockefeller Foundation. The programs were broadcast in the spring of 1937 from Station WOR and were carried by the Mutual network and the stations of the Canadian Broadcasting System. Each program presented essential information about the particular phase of music which it discussed, and this information was richly supplemented by the rendition of instrumental and vocal numbers. The WOR orchestra and a varied array of distinguished singers were used to present these exhibits.

The series was thus an experiment with music-teaching and, at the same time, entertainment. The effort was to create an



art-form designed to give a large audience both pleasure and information. To check upon the results, special groups of listeners were organized. These were to report, on the conclusion of the series, on what they had learned and on the artistic quality of the programs.

At the time this is written, the results of the experiment have still to be formally assessed. But from hearing the programs, one would say that the attempt had been successful although the method employed should be used in a smaller area in music. A dozen broadcasts could profitably be applied, for example, to the modern symphony alone or to American musical comedy. Yet while it suffered from trying to do too much, *Music and You* developed a sound attack on the teaching of music by radio, and one hopes that the pioneering work which it began will be continued. The growing interest of Americans in good music, together with their great ignorance of musical background, makes such activity highly valuable.

But no group has provided a laboratory for artistic and technical research comparable to that of the Columbia Workshop, an activity established by the Columbia Broadcasting System for experimentation and for the production of one weekly program brought to birth in the course of its studies.

The Workshop was organized to investigate the physical possibilities of radio apparatus and studio environment as these are applied to the making of programs. Naturally, episodes were sought such as would give the technician an opportunity to "do his stuff." Irving Reis, the sensitive and energetic director, frankly confessed this. "We were accused of being a bunch of tricksters," he said. "But our conviction was that what we might learn by creating opportunities for experiment with

sound would ultimately prove necessary for the broadening and deepening of radio art."

The material Mr. Reis and his associates have worked upon has almost always been exciting. A Voyage to Brobdingnag, dramatizing a part of Swift's *Gulliver's Travels*, offered the problem of rendering the voices of giants and midgets. Charles Dickens' *The Signal Man* required the sense of descending into a deep canyon; and the quality of voices was particularly important, especially those of the visitor entering the cleft for the first time, and of the signal man who had become psychologically affected by his strange and gloomy environment. *Split Seconds*, one of Mr. Reis's own compositions, was a story told after a crash by an aviator, who, under anaesthetic on the operating table, jumbles together the drone of his machine and the events that had led to the catastrophe. Archibald MacLeish's *The Fall of the City* required the sense of a great crowd in a city square and demanded peculiar acoustic qualities for voices speaking in the open against a background of folk-tension.<sup>7</sup>

What the entire Workshop experiment is doing for radio mechanical technique and for artistic quality will probably be told by Mr. Reis in book form. However, some account of the making

<sup>7</sup> One feature of the Workshop's activity has been the development of a series of dramas entitled *The Land of Plenty*. This series was under the special direction of Lucile Charles and enlisted dramatists like Irwin Shaw, Sherwood Anderson, and Lynn Riggs in an effort to interpret modern problems, such as health, housing, and education, through half-hour radio programs. Six plays were written, and a number have been presented, such as Irwin Shaw's *Supply and Demand*, and Albert Maltz's *Red Headed Baker*. These dramatic sketches represented an effort by the broadcaster to "bring outstanding dramatists to the microphone" and an interest on the part of the writers "in experimenting with the microphone as an instrument of social awareness of passing events."

of *The Fall of the City* will give a sense of the type of problem faced (although each program has offered a different one) and the methods used in meeting it. This script, on which Mr. MacLeish worked a year, was not susceptible of treatment by the ordinary studio. Nor would simple out-of-door production, in addition to being difficult in many ways, have achieved the peculiar effects of crowd movement and sense of space that were desired. Some artificial means was needed to give an illusion of reality better than reality itself.

The solution proved to be the use of the Sixth Regiment Armory in New York City as a studio. With this, with an ingenious employment of several microphones in different positions, and with the judicious placing of actors with respect to the microphones for various purposes, a number of extraordinary sound effects were produced. The voice of the announcer against the background of the crowd was particularly effective. Neither the sense of sounds around him nor the clarity of his own voice was lost. And I know of no more effective use of sound for histrionic effect than the vibrant change in the Dead Woman's voice when she ceases talking of her own feelings on coming from the tomb and prophesies: "The city of masterless men will take a master!" The contrast was made possible partly by the "studio" facilities and partly by the actress's first speaking close to the microphone in a conversational tone and then stepping back ten feet and raising her voice. But the emotional effect of the change was tremendous.

One could gladly linger with this particular radio mystery of blended engineering and art. For education, as well as for broadcasting in general, Mr. Reis's experiments have a high potential value. If they make literature and drama more vivid, as they

have with *The Fall of the City*, with Swift, with Masfield's *Dauber*, with Keats's *Eve of St. Agnes*, and with Coleridge's *Rime of the Ancient Mariner*, they will affect those who teach and those who learn, whether children or adults. Here, one feels, exciting progress is being made in developing a still half-known instrument. But we must turn from this particular phase of radio activity to another which has a special significance for education. This is nothing less than the educator himself, who is something of a mystery also.

## Educating the Educator

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WHEN broadcasting in America first opened its doors, it sought actors, singers, comedians, and educators as guests with what in several senses was an indiscriminating hospitality. In the fifteen years since this happened men and women from the stage and concert hall have quickly made themselves at home in the broadcaster's studio. Today, thousands of them are "successful radio artists." But from the beginning, as we have seen, the educator has adapted himself to the new medium of communication with difficulty and a doubtful success.

In most cases his work in the classroom did not fit him for the microphone. He lacked "showmanship." Often he did not wish to acquire it. Sometimes he does not now. One professor with considerable radio experience recently argued with me earnestly that a college teacher could not broadcast with dignity and do it successfully; and, on the other hand, could not broadcast successfully and retain his professional reputation. Another eminent teacher spoke firmly against compromise with radio methods—that is, with showmanship. "We have something to give the public," he declared. "The public must take this as we are used to presenting it. If it must be thinned and sugared until it ceases to have body and value, it should not be given at all."

Yet, with recent years, the trend among educators has been to accept the radio—at least in theory. And with this acceptance has come a realization that to use the radio the educator must acquire new experience and techniques. It is admitted that even when he has done this the question of what will happen is still to be answered.

Like the audience and the radio spectrum and the art of radio, the educator is one of the mysteries of broadcasting. However, in the last several years the determination to educate him for radio has intensified. Officials in high positions like John W. Studebaker, United States Commissioner of Education, Levering Tyson of the NACRE, and A. G. Crane, Chairman of the National Committee on Education by Radio, have been of one mind with regard to this. So have many commercial broadcasters, who have offered their facilities and guidance as a kind of informal radio school for teachers. So have officials of foundations. A number of teachers and students who hope to do educational work on the air have agreed with them. As a result, the process of preparing educators for broadcasting has become one of the significant activities of the last several years.

For some time prior to 1936 the National Advisory Council on Radio in Education had argued that one method of wedding educational experience and radio experience was by the creation of radio workshops. This idea found a crude practical application in radio courses at colleges having radio stations and in the efforts of those in authority to train both faculty and students in the art of using the microphone. The University Broadcasting Council had really developed a workshop in 1935. This organization had built up a staff composed of university men and radio professionals. It sought advice and information

from faculty members and employed many teachers in actual broadcasting. It called upon the stations in its membership for the details of production. Thus, the total activity provided an interchange of academic and radio experience. The venture was effective particularly in developing a special group of workers primarily interested in serving education and concerned also in developing high technical capacity.

However, it remained for the Ohio State University Bureau of Educational Research, under W. W. Charters, to organize the first workshop named as such and operated under professional guidance. This became possible with the acquisition of Meredith Page, formerly Program Director for Station WOR. Mr. Page had been a pioneer in ideas and techniques for the effective use of educational material. Early in 1936 he came to Ohio State on a special fellowship created by the Payne Fund and began his work of training students and producing programs. He was able to use Station WOSU at the University and WLW in Cincinnati. Page developed a number of promising script writers, and one of his outstanding programs has already been described. While he wrote many of the individual broadcasts himself, he quickly put others to work. His most notable achievement, the series *Men Who Made America*, has thus been the creation of a number of writers. Careful research has characterized the building of these scripts.

Meanwhile, the Federal Radio Project under the Office of Education had begun its work, and early in 1936 Commissioner Studebaker, on the recommendation of Director Boutwell, decided that admirable training for educators interested in broadcasting might be provided by the establishment of a center where teachers and students eager to work with radio and edu-

cation could get training in the writing and directing of programs. New York University had planned for radio instruction as early as May, 1934, when the Division of Adult Education was created. In 1935 it had offered courses in radio. Now, in 1936, it proposed to cooperate with the United States Office of Education in the creating of a really comprehensive workshop for instruction in broadcasting. The cooperation of the Educational Director of N.B.C., the Director of Talks at C.B.S., and many New York stations was obtained, a staff was assembled, and the first Workshop became a summer course of the University open to selected individuals for the period of July 6 to August 15, 1936.

It differed from any previous attempt at training in a number of vital respects.

In the first place, it afforded opportunity for a study not of one or two stations but of a dozen, and these included the central plants of the three national networks. Educators could come to the very center of engineering and artistic activity in broadcasting.

Again, the instructors, the visiting lecturers, and the opportunities for practice were notable. Burke Boyce, for eight years Continuity Director for N.B.C., taught script writing. Production was under Maurice Lowell, on leave of absence from the Chicago offices of the same network. Rudolf Schramm, Music Director of the Federal Radio Project, gave a course in the relationship of music to the creation of successful broadcasts. Executives from network offices, men active in station production, script writers, and educational experts from universities and the Office of Education appeared for special lectures. Finally, the Workshop students attended rehearsals and broadcasts of the



five programs of the Office of Education then on the air and visited studios in various stations to study commercial and educational broadcasts.

The composition of the classes also represented a creative experiment never before attempted. Every effort was made to admit only those who were already teachers and expected to carry their training back into actual radio practice, or students who expected to be teachers and to make broadcasting an aspect of their work. Workshop members came from various parts of the country. The nucleus of a national training center was thus established.

It became apparent from the first that important if limited results could be achieved. Students wrote and produced programs, and two of these took the air, one on the Columbia network and one on WNYC. Since the first course was completed, two additional ones have been offered. By May, 1937, Station WNYC was preparing to take four programs developed by Workshop classes, and WINS had produced six. The Office of Education acting group was also working on programs with the aid of advice and facilities of the Workshop. An alumni association, the Radio Laboratory Club, had sprung up. Meanwhile, many students have gone back to school systems in different parts of the country and have put their experience to work. The Indianapolis and Rochester schools, for example, have benefited in this manner. Some former Workshop members have written scripts for network reproduction. Naturally, a six weeks' course could serve as no more than an introduction to radio activity, but this introduction has in many cases been followed by additional experience in the localities to which students have

returned. It has thus served as a gateway for educators, through which they have passed into the actual radio world.

Other workshops have sprung up in various parts of the country as a result of the demonstrations at Ohio State and New York University. They can be found at Purdue University, St. Lawrence University, the University of Louisiana, the University of Florida, Oregon State College, University of Michigan, the University of Wyoming, Southern Methodist University at Dallas, Texas, and other centers. The Radio Division of the Bureau of Educational Research at Ohio State University is working on the formation of a center which already represents twenty-eight colleges and other groups.

Station WHA at Wisconsin, with its staff of experienced officials, operates what is essentially a workshop for university students and faculty. One member of the Wisconsin staff has had the benefit of a training entirely different from that of the workshop. This type of instruction has been provided under a plan agreed upon in 1935 by the General Education Board and the Columbia network, and soon extended to include N.B.C. The Board selects a number of workers in radio who are members of college faculties or of the staffs of educational stations. It gives each worker a fellowship for a definite period—usually of six months. The worker goes to the New York stations of N.B.C. or Columbia and is placed in successive departments as an observer or worker. In this way the educator is expected to supplement his existing experience with a knowledge of work methods followed by the leading agencies of the industry.

An active part of the Office of Education's Federal Radio Project has been the Radio Script Exchange. In June, 1936, the

Project, with its script writers and acting group, completed a series of six manuscripts, called Interviews with the Past, for use as broadcasts. These were offered to schools, colleges, and amateur groups who might wish to practice with professional materials or make actual productions. An extensive demand for this material soon developed. Then came the idea of creating as a part of the Project an office where various stations might send educational scripts which had been found successful, thus making them available for other stations and for radio groups.

By the spring of 1937 more than eight hundred scripts had been received from various sources: the educational stations, the networks, Civilian Conservation Corps camps, adult education and Works Progress Administration groups. Some two hundred of these were considered usable. With a small but diligent staff, the Exchange has already prepared one hundred of these for use. It has prepared also a radio manual and a radio glossary and musical arrangements for a number of its offerings.

More than 1,700 groups have availed themselves of the facilities of the Exchange. They include high schools, universities, Civilian Conservation Corps camps, theater guilds, and civic organizations. Of these groups, 122 have made actual broadcasts over local radio stations, using 890 programs. The stations have been located in forty different states. Altogether, 45,000 scripts have been distributed. Many of these have gone abroad. Requests for material have come from Alaska, Argentine, Australia, Canada, the Canal Zone, Cuba, France, England, South Africa, and many other points beyond the borders of continental United States.

From the educator's point of view, the service represents another opportunity to familiarize students and teachers with

the work of the professional radio world. The scripts are laboratory implements. The avidity with which they have been sought indicates that a necessity for such a service was not only existent but urgent.

Workshops and script services lead toward tangible activities. The long-talked-of attempt to unite educators and give them a common philosophy with regard to broadcasting has involved more intangible factors and has made less progress than any other aspect of training for the educator. Yet it has received much attention in the last several years.

To some extent, the Federal Radio Education Committee has been a centralizing agency. With the United States Commissioner of Education at its head and representatives of all types of educational activity as members, this body has brought together various groups which had previously acted independently. It may represent a permanent means of giving an authoritative voice to education in the broadcasting world. The NACRE has felt that it has this possibility. However, others have believed that while the F.R.E.C. has done and may do valuable work, it is a limited means for unifying educators. The Committee brings broadcasters and educational leaders together and whatever decisions are made represent the joint opinions of both groups and not the opinions of educators alone. In addition, the work of the Committee has thus far been general and can not represent the attitude of localities and sections. Some means has been sought of drawing educators together both locally and nationally and of developing cooperative thinking, planning, and action for them as a separate group.

In 1936, Arthur G. Crane, Chairman of the National Committee on Education by Radio, presented a plan looking toward

such a result. Dr. Crane was a member of the Federal Radio Education Committee and acted as the leader of its Subcommittee on Conflicts and Cooperation. He was thus particularly interested in the educator's responsibilities toward education and toward broadcasting.

The American Public Board Plan, as he called his proposal, looked toward a kind of educational parliament on radio activities. Each state would create a board on which all educational interests would be represented: the public schools, the universities, educational organizations, and other bodies of a public character. The state boards would send representatives to a national board, which would determine general policies and promote certain national activities. Activities of a local nature would be carried on by the state organizations. Out of the state and national efforts would grow groups of educational programs which would be broadcast by the American networks and by individual stations. Education on the air would thus become unified and authoritative. It was proposed that foundations, public educational systems, and commercial broadcasters join in providing funds for the undertaking.

The National Committee on Education by Radio promptly endorsed the American Board Plan, but elsewhere it was received doubtfully. Educators did not rally to it, and broadcasters looked at it coldly. Perhaps they smelled the beginnings of government ownership in the idea, although there was no suggestion of this in the proposal. At any rate, no adequate financing for the project was available, and it lay apparently moribund in its chrysalis of theory.

But Dr. Crane, seeing that the project as a whole did not meet with approval, has meanwhile turned from the effort to make

an entire tree to the fostering of a seedling. In his own Rocky Mountain Region there are at present no educational stations, but there a number of excellent commercial ones and a number of thriving colleges and educational organizations. He has brought these into conference, and from an enthusiastic meeting there has emerged a preliminary plan for a Rocky Mountain Public Radio Service.

This Service would cover Wyoming and Colorado. It would affect fifteen commercial stations, eight colleges, five educational organizations, four state departments, and nine citizens' organizations. It would be under the guidance of a central council on which all of these agencies would be represented but would have an executive board and a director and staff for the creation of the actual programs. The effort would be to raise the standard of noncommercial programs everywhere, to the benefit of the stations, the various organizations of a public and educational nature, and the general public itself.

However, a prospectus which has been issued declares that unfortunately "funds for the establishment of such an organization can not be raised in the region." Therefore, the promoters of the idea are looking for outside assistance. But apparently the project has wide public support in its locality and represents a regional aspiration somewhat greater in scope than any heretofore expressed in action.

I say "greater in scope," for we have seen that there are already in existence comparable experiments in educational cooperation. The University Broadcasting Council, much more limited in the number of cooperating organizations, but partly self-sustaining, has been operating for more than two years. In Ohio, the effort for cooperative action in education by radio

exceeds the Rocky Mountain project in number of organizations affected and size of population to be served. Wisconsin's state-owned radio system might be thought of as a not dissimilar effort, although the form is different. However, the new plan seems vital, opens up a far-western territory, and if put into practice would make a significant demonstration. One hopes that it will get support from sources other than its own stations, colleges, and organizations similar to that which the Chicago area has drawn from the Carnegie Corporation of New York and the Rockefeller Foundation, and Ohio State from the Payne Fund.

In the course of considerable study and field work, I have become conscious of two problems relating to the education of the educator which have as yet received little attention from broadcasters and public officials.

One is the problem of paying educators in broadcasting for their work. In college after college and station after station I found earnest men and women gladly laboring to instruct children and adults by air. Almost all of them worked at their tasks without remuneration. The University Broadcasting Council pays its staff, and some reduction is made by one at least of the three universities in the teaching schedules of professors who give a large amount of time to radio. The public school systems of Indianapolis, Cleveland, and Rochester assign broadcasting as a regular teaching duty with varying amounts of credit taken in the form of relief from the teaching load. Ohio State makes a regular deduction from this load where the amount of broadcasting warrants it. Wisconsin makes allowance in some cases. Doubtless other institutions give their teachers credit for radio service. But I doubt if five per cent of

the schools and colleges with radio activity provide time or remuneration for faculty members engaging in microphone activities.

If the educator is to become active in radio, he will need to realize that he can not broadcast without pay, and he will have to educate his official superiors to understand this fact. The preparation and delivery of a half-hour broadcast ordinarily takes eight hours of time—probably thrice what the average instructor gives to the preparation and delivery of a lecture in his classroom. The broadcast requires a much more careful art than class instruction. It must be conceived, if it is to be successful, so as to arouse and hold interest; it must be written, timed, rehearsed, and discussed with the station's production manager. Men and women carrying full teaching schedules can not easily spare so much time and effort without pay, particularly while their salaries often force them to seek other sources of income. Unpaid educators can not do justice to themselves in broadcasting except by a cruel expenditure of energy. Usually, they compromise and spend the minimum of time, producing the minimum of interest and success. Many commercial broadcasters recognize the injustice of asking busy men and women to labor without compensation. So do many of the teachers who broadcast. So do many college officials. Meanwhile little is being done about it. Yet we shall never know what educators can do as broadcasters until they have the time or the incentive to do their finest work.

An attitude which immediately struck my attention on looking over the field of educational broadcasting was the universal assumption by both broadcasters and schoolmen that, if only they could work together in harmony, the entire problem of



education would be solved. Here were two excited groups, often gesturing angrily at one another, yet each with an implicit faith that between them they had every resource for success. The thought came to me almost instantaneously: "Why are these people so naïve as to assume that all education by radio will develop through their separate or united efforts?"

It seemed obvious to me that this was unlikely to be the case. I looked at the men in the stations. Sometimes I felt that they were admirably equipped to foster education. On the other hand, not infrequently they seemed endowed by nature and experience with the very qualities most calculated to retard or kill teaching by microphone. I felt that before education by air could arrive at maturity, many stations would have to get different types of persons to direct it.

In the case of the educators, I found myself even more pessimistic. I have heard some educators on the air who seemed to me examples of what broadcasters of education ought to be. Were I hiring and firing educators for radio work, I would surely keep a number of teachers who have acquitted themselves brilliantly in broadcasting. But I would discharge the majority of those I have heard, or give them notice that great improvement was necessary if they were to continue.

Often this improvement would be possible. In other cases I feel sure it would not be. Attitude of mind, lack of imagination and creative capacity, poor voice or delivery—such elements indicated clearly that the potentially adequate broadcasters among teaching staffs were relatively few. I believe those few should be diligently sought; many of them are still in hiding. But I believe also that there should be a recognition of the pos-

sibility that in the future a large number of educational broadcasters must be found outside institutions of learning.

Some educators of this type have already appeared. Alexander Woollcott, Carl Carmer, and Hendrik Willem van Loon (although van Loon has been a professor) came to radio from the nonscholastic world. The script writers of educational broadcasts will probably come predominantly from that world. So will the directors and executives; few of these, of course, have had teaching experience. All this is perhaps to say that education by air is more an art than a profession and that artists will eventually play a larger part in it than they do now. If the schools can produce many of them, I shall be glad. I think they will produce their share. But for many we must look elsewhere. Where? Among writers and dramatists and actors, in part. But this question leaves us with another mystery which time must unfold in its own fashion.

## Profits, Cost, and Control

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THROUGH its ten years of activity the American broadcasting system has maintained that diversity of control which it so proudly hailed as freedom in 1927. Seeking to appraise the value of what has been done for education during the past several years, one immediately collides with the rather intricate and confused framework within which educational broadcasting must be done. This had had a definite effect in limiting types of education that have taken the air and in determining their quality.

The Federal Communications Commission is, of course, the supreme supervisory element in the system. It has under consideration at the time a number of problems which may prove to be explosive: possible regulations to widen and safeguard freedom of speech; the growing power of the networks; the increasing acquisition of broadcasting stations by newspapers. But these matters affect education only indirectly, and while freedom on the air is highly important to education and monopoly of facilities would be more than likely to affect it, there is so much else of more immediate interest to be considered in our limited study that I shall leave these matters with no more than a mention of their significance. The Federal Communications Commission is skirting all of them warily. It has taken decisive

action upon none, and there is a question in some cases of what power it has to act on these problems.

With regard to education by air, also, the Commission is proceeding cautiously. Its official attitude at present is that the Federal Radio Education Committee is at work on all problems affecting education. The Commission will await the result of the Committee's labors. When these labors have indicated what the cooperation of educators and broadcasters can accomplish, the Federal Communications Commission may take further action. As we shall see later, this is not a unanimous opinion on the part of the commissioners; but it is the majority opinion, and the one that counts. Therefore, so far as the framework for education is concerned, we may return to the commercial stations. They regulate education, although always with an eye on the Commission to observe how it regards their behavior.

The commercial broadcasters represent that individualistic activity which Americans praise but often find exasperating. The three national networks exert a great power on the stations in general. As we have seen, they control to a degree some two hundred and ninety-three stations. But there is a strong rivalry between the great systems. This fact often prevents an agreement on general policy. Also, each network acts with definite limitations from within. It must maintain satisfactory relations with its individual members or risk losing some of them. Consequently, it can not always make decisions which its leaders might wish to make. Nor, when a decision is made, can the network always be sure that it will be followed by the full tally of stations.

In a similar fashion the independent broadcasters within each network are limited in some of their actions by the head-

quarters offices in New York. A unifying agency for the entire industry is supplied by the National Association of Broadcasters. In theory, this organization represents the entire industry. It includes in its membership all the network stations and many independent ones. Its annual conventions afford opportunity for an expression of opinion by all its members on radio policy. Between conventions, N.A.B. officials furnish information regularly to broadcasters on matters affecting their interests, watch carefully the attitudes of Congress and the Federal Communications Commission toward commercial radio, and speak to the press and the public on behalf of the industry. However, the N.A.B. has only four hundred of the seven hundred American stations on its membership list. Also, its officials do not always see eye to eye with the networks. It is thus both a unifying element and something of a brake on the power of the great chains.

The entire situation might be summarized by saying that, on the whole, the networks lead the industry both in opinion and action, but lead with definite limitations and not a little confusion.

The vigorous educational experiments described in the last chapter have suffered from this disruptive type of control. And, in the main, the character of control has been the result of the fact that broadcasting in America is a business. Because of this fact, the educator does not deal with networks and broadcasting stations alone; he deals with them as they are influenced by their advertisers—the source of their income. Let us pause to ask how this affects in theory and practice the problem of education by air waves.

Operating for profit as he does, the broadcaster naturally

seeks so to administer his plant as to show a reasonable gain. He sells radio time in order that he may achieve this result. As a matter of fact, he sells less time than is commonly supposed. The networks carry advertising on only from thirty to forty per cent of their programs. Of course, this figure is for the entire schedule. In the evening hours between seven and ten o'clock, when the largest radio audience assembles, a much higher percentage is sold—from seventy to eighty per cent.<sup>1</sup>

We have seen that the broadcaster professes a cordiality toward education. Yet he must make his sales, and the easiest hours to sell, and the most profitable are those when the greatest possible audience is available. Advertisers want large audiences. But so, on the other hand, do educators. Both can not have them at once. The inevitable result is a conflict between business and education.

Now the broadcaster declares that while the conflict exists potentially, actually it can be avoided. Obviously, this must be

<sup>1</sup> The amount of sponsored time fluctuates greatly from month to month and, of course, varies with different networks and stations. In 1935, N.B.C., according to the report of its Advisory Council, sold 28.8 per cent of its time. Hettinger, in 1932, found the commercial time for the N.B.C. and C.B.S. networks to have been 36.5 per cent in 1931 and 25.5 per cent in 1932. (*A Decade of Radio Advertising*, by Herman S. Hettinger, University of Chicago Press, 1933, p. 115.) Cantril and Allport (*Op. cit.* pp. 73ff.) reported that for certain Columbia stations the sponsored time for an entire week was 33.76 per cent of the total radio time, and that the average time sold between the hours of 7:00 P.M. and 10:00 P.M. was 71 per cent. Early in 1935 Professor Bartlett found that 46.7 per cent of the time of three stations in the Syracuse area for a week was sponsored by advertisers, and that from 7:00 to 11:00 P.M. 82.1 per cent of the time was sponsored. In larger cities less time is generally sold than in smaller ones, where rates are lower and the stations must have more advertising to get what they consider a good income.

by a sacrifice on his part: he must deliberately reserve a certain amount of saleable time for education. He declares himself willing to make such a sacrifice, and he can point to many occasions on which he has done so. Yet educators feel that the compromises the broadcaster makes for nonprofit ventures have not been and may not be of a kind and number to develop an adequate service for education by air.

They feel, in the first place, that the general attitude of the broadcasters toward education has never been enthusiastic. I found this conviction among a large body of teachers and educational officials, many of whom would like to see the present system of broadcasting preserved. There has been considerable justification for this feeling in the past; there is definitely less justification for it today. My own observation indicated a great variety of attitudes. I found many station owners essentially indifferent to education, many genuinely interested in it. Among network officials the awareness of the importance of education seemed to me to be general, although interest and enthusiasm differed with individuals. Some network officials, I should judge, are relatively uninformed about education, and consequently the less concerned about it. They have, of course, many other problems to consider. Often they have been annoyed by the importunities of innumerable groups claiming to represent education. A number of them doubt if any kind of education can be made sufficiently interesting to hold a place on the air.

Certain facts and incidents reflect the hesitant and sometimes indifferent attitude of both individual station owners and network leaders toward educational broadcasting.

For example, education gets little formal recognition as a part of a network's activity. In the 1937 annual number of *Broad-*

*casting* in which the officers of all the chains are listed, there is no mention of an official in charge of education in any of the three national networks, although two of the chains actually have such officials. However, the new network, the Mutual, does not even have a representative in charge of educational affairs as a part of his regular work. When I asked for such an officer, I was sent to the Continuity Director, who edits commercial announcements! We had a good talk about business.

The ignorance of some higher officials regarding their own educational activities was indicated in the course of a conversation which an educator recently held with the head of a network. The former mentioned the executive—whom we will call Brown—who was in charge of all broadcasts concerned with teaching. “Brown?” asked the president, puzzled and slightly annoyed. “Who is Brown?”

In Chicago I was told of a conversation which indicated the attitude of a station manager toward education. The station which this official administered was a member of the University Broadcasting Council. As explained in an earlier chapter, all the seven stations belonging to the Council were supposed to agree upon ideas for programs, let the Council staff prepare the scripts for the broadcasts, and then put them on the air. But this particular manager would agree upon none of the ideas submitted to him and finally declared that he wanted no programs. A professor associated with the Council remonstrated with him.

“Why do you belong to the Council, then?” he demanded.

“To get credit for educational activity,” promptly replied the manager.

“But you will not get credit, will you, unless you take programs?”



This question astonished the broadcaster.

"Well," he replied, "we pay five thousand dollars a year for the support of the Council, and that indicates an interest in education. We *ought* to get credit for it!"

One could give further incidents of a similar kind. However, they are by no means representative of many individual station owners, nor do they fairly represent the attitude of a number of important network officials. Furthermore, in so far as an attitude of negligence or indifference has existed, it has been partly the result of a sincere uncertainty among radio officials as to what should be done in the educational field. Perhaps it would be fairer to characterize the broadcasters' attitude (if an attitude can be said to exist where there are actually great differences in individual feeling and action) as one of hesitation and perplexity rather than indifference. Let us examine the situation in more detail.

We have already seen that individual stations vary widely in attitude and work. Ignorance and lethargy in some contrast sharply with intelligence and enterprise in others. So far as the networks are concerned there is a greater homogeneity of feeling and practice, but again there are manifest weaknesses and manifest points of excellence.

The Mutual is a new organization. It has created and maintained educational features; and in specific instances has given marked cooperation to educators. Yet it has no educational director and has announced no educational policy. With N.B.C. and C.B.S. we find a firmer organization and philosophy. Both have educational directors. Both have advisory boards of educators for certain programs—for example, N.B.C. has had its Advisory Council for more than a decade, with a subcommittee

on education; it has an advisory committee for its Music Appreciation Hour; and provides itself with expert counsel on the activities of America's Town Meeting of the Air. Under its newly appointed Educational Counselor, James Rowland Angell (until recently President of Yale University), another committee is being organized by the N.B.C. educational director. Similarly, Columbia has an active advisory committee of educators for its American School of the Air, another for its children's programs, and a third for its New York Academy of Medicine broadcasts. Both networks pay a large number of the educators who render active service in this fashion. Finally, it should be kept in mind that the many strong educational programs developed by the networks are a testimony to their diligent activity in teaching by microphone.

Yet certain weaknesses in network practice must be set against positive policy and achievements. These weaknesses may be grouped under two heads: defects of organization, and defects in articulation and completeness of policy.

As to organization, an outsider feels from his first contact with network educational activities that the educational directors lack both authority and facilities for the adequate prosecution of their work. Both networks tend to carry on education through individual programs having a seemingly slight relationship to the central educational office. In neither network does this office have sufficient staff or equipment for keeping complete and carefully organized information about education. The seeker for knowledge about broadcasting activities in the teaching field is likely, in fact, to be shunted from the music to the statistics department, to certain individual officials who deal with activities affecting education, or to those in charge of particular pro-

grams. The staffs for such regular features as Columbia's School of the Air or its Workshop, and N.B.C.'s Town Meeting or Music Appreciation Hour seem to be functioning as separate organizations with little relationship to a central office. Again, one gets the sense that an educational director in either network is a person with limited powers, working under a policy subject to frequent change, and dependent upon the decisions of higher officials, who are often moved by considerations arising from other aspects of broadcasting. As to both organization and power, the appearance may be worse than the actual condition; perhaps the educational departments chiefly need to be presented to the public in a more definite and less confusing form. Nevertheless, my own conviction, after discussing this question with officials of both N.B.C. and C.B.S., is that there is a scattering of effort which should be brought together under a more centralized direction.

Doubtless the looseness of organization which seems to exist is partly the result of a policy that in many respects is still hesitant, and needs thinking through. It is true that certain aspects of the policy are clear and definite. These have been noted. But before educational directors, educational advisory boards, and educational programs can function at their best they must work under a comprehensive and specific conception of the activity in which they share. This conception seems to me to be lacking.

In what way is it lacking? I should say that the lack lay in several directions. Perhaps all might be summed up under the statement that while he exercises authority over education, the broadcaster does not fully accept responsibility for it. Of course one sees his failure to do so most glaringly in the cases of independent stations, where some owners say: "We will give time to education, but it is the educator's task to furnish programs."

Not all stations put the responsibility for education so completely upon the educator. Neither do the networks. Yet I have observed no station or network that was not to a definite extent assuming that the educator, while having no final authority, had a definite final responsibility. To some extent all have implicitly or explicitly laid the blame for their own lack of action or for ineffective action upon educational experts. Nor has any station or network, to my knowledge, laid out a comprehensive policy on education, saying: "We have charge of this activity and are fully responsible for it. We have gathered a board of experts with whom we will lay out a complete program. We will carry this into action. We realize that any educational program will be imperfect, but we propose to attempt a thorough and consistent one, and these are the lines along which we will proceed." Instead, the actual practice has been to work experimentally with the best material that turns up. Experiment is not part of a complete program, but represents a series of trials in various corners of the field of education, the attempts often having no relationship to each other, and never to a firm central philosophy and procedure.

The failure to accept responsibility again can be seen clearly in the matter of paying for education. For many features, stations and networks have paid the total cost themselves, just as they do pretty consistently in the fields of music, drama, and general entertainment. Yet frequently they deny any general responsibility to pay, and will declare: "We give valuable time; the educator should furnish the programs."

Should the educator? The broadcaster collects an enormous amount of money from the American people. His plea is that he collects the money so that he can furnish a broadcasting program. Education is part of that program. In Great Britain the

British Broadcasting Corporation receives most of the money which the people pay for radio, and it supplies educational as well as non-educational broadcasts. Incidentally, it pays its educational speakers well. Yet the American broadcaster, who gets more money, often argues that he need not pay an educator or even supply music or other station service to him.

Naturally, when a college or a "pressure group" stands to reap an advantage from a broadcast, there is some reason why it should help pay for what it broadcasts. Otherwise there is no reason. And while the broadcaster can not be blamed for accepting the services of good speakers who gladly perform free, he can be blamed justly for failing to pay when the quality of the programs suffers because payment is not made. This is often the case.

I recognize the difficulty of disposing so categorically of the cost question. I shall comment upon it later at greater length. Yet it is closely allied with the question of responsibility, and, I believe, must be faced and dealt with in a more specific fashion than it now is. Certainly it has made for much confusion and many bad programs.

In the foregoing comments on policy I am not seeking to attribute blame, but rather to clarify a situation. It is understandable that in an experimental activity such as educational broadcasting the road should be difficult. Delay and hesitation have been inevitable. Mistakes have been inevitable. Certainly the educators have delayed facing their responsibilities in the radio world, and have made their errors in practice aplenty. But the broadcaster has often implied that his own policy has been consistent and adequate, and that the confusion has been entirely with the educational experts. The facts seem to me to show

that both groups have been confused. I am seeking to point out clearly the tentative and inconclusive behavior of the industry. This has been too little emphasized.

How have the confusion and hesitation which have existed affected the work of the past several years? Undoubtedly they have affected it and are continuing to do so. Educators have been keenly aware of gaps and shortcomings, all of which have their relationship to commercial broadcasting policy. Specifically, they have felt that the cause of education has been impaired both by individual stations and networks in the following ways:

Broadcasters have shown much less enthusiasm than educators would like to see for experiments in establishing comprehensive schedules or long-sustained programs.

They have tended to offer the poorer and less saleable hours to education.

When cooperating with educators in the production of programs designed to run for some time over networks, some broadcasters have not provided reliable lists of such stations as would use these programs in time for educators to send out effective publicity in advance.

While offering the facilities of a network, they have delivered only a percentage of it.

They have often given poor cooperation in the planning and production of programs.

Some of these complaints have acknowledgedly not been applicable to the entire industry. To most of them the stations and networks have definite replies. But all are of significance in so far as they are true, and deserve examination.

A most impressive recent arraignment of broadcasting practice has been made in a substantial booklet, *Four Years of Network Broadcasting*, issued by the NACRE's Committee on Civic Education by Radio, of which Thomas H. Reed served as chair-

man. This booklet describes the experiences of the Committee in working with the facilities of the N.B.C. from February, 1932, until June, 1936, for the production of the well-known series of programs, *You and Your Government*. All the complaints listed above can be supported by evidence presented in this report. There were numerous changes of hours; there was a shift from the Blue to the Red network; the programs were cut from the half hour agreed upon for a four-year period to one quarter of an hour; lists of stations were not supplied in time for "merchandising" the programs to the public; and the various groups of broadcasts which comprised the entire experiment were not carried consistently by the same stations. The result was that the original audience which began to follow what had been the largest of purely educational experiments was constantly changed as a group was lopped off with the withdrawal of one station, or another group was added arbitrarily as a new station was given service. The listeners had no voice in the making of such changes. Often they protested against them. Listeners could not know surely in advance at what hours and from what stations the NACRE programs would be broadcast. Such lists of stations as were presented in advance by the network were always changed by the time the programs took the air. As a result of its experience, the Committee on Civic Education by Radio despaired of gradually building up a consistent body of followers for its work. It felt, in 1937, that "it is useless at this time to attempt systematic education by national network broadcasting at hours when it will be available to large adult audiences."

In this case the causes for the many disruptions of schedule and lack of needed information were always commercial. The network wished to change the hour of the program because it

could sell that hour. It wished to shift from one network to another because the arrangement was profitable to it. Some of its stations would not take certain programs because they could sell the time at which the programs were scheduled. The experience was a clear demonstration that in this case the broadcasting authorities had not adjusted satisfactorily the conflict between business and education.

Of the Columbia Broadcasting System, which took other NACRE programs, the Committee was able to say that "it has provided a much larger list of stations [than N.B.C.] for the programs it has presented under NACRE auspices." But they felt that "Columbia's policy of booking an educational series for a very limited number of weeks would seem to preclude the possibility of any extended educational effort over its facilities." Here was a definite tendency to avoid sustained experiments, and the implication of the Committee was that this tendency arose from business considerations.

Neither N.B.C. nor C.B.S. has made any published rejoinder to *Four Years of Network Broadcasting*. Yet it is only fair to state here certain objections which officials of both companies have made to the account which the booklet presented. N.B.C. has denied none of the changes nor reductions in time. But the Company has asserted that all changes were made at the conclusion of a series and never while a series was in progress, that the reduction in time from thirty to fifteen minutes was jointly agreed upon as likely to improve the interest-holding quality of the broadcasts, and that the difficulties in booking stations were the result of arrangements between the network and individual stations, which already existed when the experiment began, and could not have been altered by network headquar-



ters. The point is also made that while changes of hour and network sometimes brought losses, they also brought definite gains. In the end, the company asserted, a larger number of people became familiar with the programs because of the shifts.

Columbia officials, on their part, sharply deny that the booking of a series for a limited number of weeks (from ten to thirteen) meant an unwillingness to establish and maintain long-continuing programs. They point out that they believe in scheduling any new program for a limited term, with the idea of testing its quality. They declare themselves willing to make a permanent feature of any series which proves to have a definite popularity with listeners. (Of course, many programs of both networks, like Columbia's American School of the Air and N.B.C.'s Music Appreciation Hour, have been maintained for years.)

Some of the difficulties encountered with the NACRE programs were in a measure attributable to the depression. Others may have become less formidable through the definite progress in educational broadcasting made in the last year and a half. The NACRE experiment ceased early in 1936. What of more recent practice? As to changes of hours and withdrawals of programs (not included above in the list of present grievances of educators, but a cause of complaint in the case of the NACRE programs) it may be said that while individual stations could be cited which have recently followed such practices, the networks have held closely to arrangements once made. There were changes with respect to certain Federal Radio Project programs, but these were agreed upon by the Project officials and the broadcaster, and were causes of little complaint.

As to the establishment of continuing features, we have seen that the Federal Radio Project programs were undertaken in

1936. N.B.C. is continuing those which it produced, although, as these pages are being written, the Project has been suspended. We have seen that both networks have initiated a number of regular features during the last two years. All these are continuing. New features are being planned by both networks. However, many educators have a definite feeling that more should be done in the field of direct adult education—that the continuing features have edged too close to entertainment. There seems to be room for experiments with broadcasts that do more actual teaching. The Federal Radio Project programs attempted to teach. Both networks are planning work which will comprise definite instruction. Literature, history, psychology, and similar subjects seriously (but not uninterestingly) treated offer opportunities for regular features that have been too little explored.

Educators still complain that they do not receive a sufficient number of good hours. Seldom do they broadcast in evening hours when full adult audiences are available. On this point I shall comment later.

Complaint still persists that complete lists of stations on networks which will take educational programs are not always available in time for use by educators for advance publicity. On account of its arrangements with its stations, N.B.C. particularly has found the making up of advance lists a difficulty.

Perhaps the educators are most aroused today over the number of network stations which accept educational programs produced at network headquarters. They point to the fact that in the case of the programs of the Federal Radio Project, N.B.C. provided less than half of its stations, and Columbia a little more than half. They resent the fact that education receives a less complete service than commercial advertisers.

As to cooperation in the production of programs, there is no

question but that it is increasing. Educators have nevertheless protested recently in a number of instances. Unquestionably individual stations are still neglectful. So far as the networks are concerned, the complaints which I heard had to do with a lack of cooperation on the part of studio employees as opposed to officials. In some cases these complaints were serious. However, they represent a protest against the action of subordinates rather than against a policy on the part of broadcasters.

With regard to certain of these grievances on the part of educators the broadcasters have specific answers.

To complaints about hours devoted to educational broadcasting, they have several replies. One is that to give education evening time would hurt rather than help it.

"I can not see," said a California broadcasting executive, "why an educator wants to go into competition with Show Boat or Jack Benny or Eddie Cantor. He ought to know that he will have only a handful of listeners." Within limits there is a validity in this argument, but within limits only. It seems clear from "fan mail" and surveys that a definite minority of listeners want to be educated; and many of them can get education only in the evening. Often they will forsake popular entertainment for it.

Again, the broadcaster replies that he does give valuable time to education. America's Town Meeting of the Air comes on the air at 9:30 in the evening. Let Freedom Ring began at 10:30. The Metropolitan Opera is broadcast Saturday afternoons. WOR gave Music and You the evening hour beginning at 8:30. Most of the NACRE programs had evening time. Education in the News has. The recent Shakespearean broadcasts were evening features. Innumerable special events of an educational and semi-educational character (speeches, political discussions, and ceremonies) are broadcast at night.

However, these allotments of good hours to regular educational features have been severely limited in number. The broadcaster does give much evening time to nonprofit programs but they are individual ones, or small groups of broadcasts. Including these, he makes a good showing in the total amount of saleable time devoted to educational and public interest features. But the result is too much a miscellany of tentative offerings and too little a planned program. There is need for a larger number of regular programs in evening hours.

Broadcasters heatedly deny they have been negligent of help with educational programs, and in many cases they can adduce proof of their interest and cooperation. Columbia has followed programs closely through rehearsal and production. The creators of *Music and You* testify that WOR has given them unremitting cooperation. Many schoolmen and librarians have assured me that they have received cordial and thorough assistance in their work, and their testimony covers all the networks and a number of individual stations.

In many cases, as with the American Medical Association programs, N.B.C. stations have provided directors and supporting music. In cities like Denver, San Francisco, Los Angeles, Chicago, and Rochester, the N.B.C. representatives seemed to cooperate generously with educators. However, one could cite also many cases of indifference and neglect. These, I should judge, are definitely fewer now than they have been.

It remains to be seen what will happen in the future with regard to the failure to deliver a full network for educational programs. This failure has been noted with the greatest bitterness and frequency by educators. John W. Studebaker, United States Commissioner of Education, has denounced it sharply. "A plan for commercial broadcasting in this country has been

evolved which provides a *thorough and definite system* for such broadcasting," he declared at Columbus, Ohio, to the Institute for Education by Radio in May, 1937. "However, in the field of noncommercial, educational broadcasting, there is no such parallel. Noncommercial, educational programs are merely offered by the chains, but there is no assured coverage. . . . There is no socially sound reason why there should be adequate, systematic, and sustained provision for an assured, regular, national coverage for ideas concerning articles of sale, while at the same time there is no similar provision for the dissemination of knowledge, ideas, ideals, and inspiration which serve the sole purpose of lifting the general level of enlightenment and culture."

The broadcasting officials have not denied the validity of this point. Indeed, I have heard network officials agree that a means must be found to assure regular, if not complete, service. And there has been less tendency as time has passed for either networks or stations to lay themselves open to the charge of "selling out" education to an advertiser.

In a Boston station I was introduced by the manager to an educator who had been broadcasting a program from that station over a period of five years. After a moment's general conversation, the manager was needed elsewhere. "By the way," he remarked to the teacher as he was leaving, "you are a headache for me. I have a chance to sell your hour. What about suspending for the season? We are almost through anyway."

"I'd like to complete the series," replied the teacher.

"There you are again!" exclaimed the manager. "What am I going to do with you? Well, we'll talk it over."

After he had left the teacher remarked: "We run into that kind of difficulty occasionally, but usually we win. He'll keep the program going."

In another case, I was talking at a convention on educational broadcasting with the manager of a school program for the board of education in a city of modest size. He explained that the broadcasts ended at 2:15 in the afternoon.

"Baseball season has begun now," he remarked, "and our station has a sponsor for the games, which open at 2:00 o'clock. The sponsor advertises a cereal. On another station another sponsor, also advertising a cereal, is broadcasting the games. The advertiser on our station has raised the question of cutting off our last fifteen minutes; but as yet the station hasn't done it."

Just then the program manager of the station in question joined us, and the educator referred to the case.

"Well, the schedule hasn't been disturbed yet, has it?" asked the station's representative.

"No."

"Wait and see if it is," replied the other.

Several weeks later, when I visited the city in question and listened to the programs, they were continuing until 2:15.

There is no question but that many individual stations, as well as the networks, are holding to their arrangements with educators, often at a loss to themselves. This fact must be set against the fact that they have often changed schedules.

On the question of delivering complete networks to education, the responsible officials have been silent. Here they face a difficult problem. Probably they will try to do something about it. The future must tell us that.

When the entire situation is reviewed, one fact stands out with particular clarity. This is, that the commercial stations, whether independent or network, lack a unified and complete policy with regard to education. Many individual stations are not as yet awake to the obligations that go with authority. The

networks are aware of it, but have not been wholly consistent in their practice, and have not fully recognized all that responsibility for education entails. Independent stations and networks have both done finely constructive and cooperative work in many respects. Yet the cooperative work of the last few years must be thought of as having been impaired by the limitations of their policy and practice.

Particularly have the efforts of the industry suffered from the tendency to attack the educational problem piecemeal rather than comprehensively. It is to be granted that the practice of proceeding by individual experiment has been natural. Nobody has had confidence as to what might represent a complete and integrated solution for educational broadcasting. Yet it is a question if the broadcaster has not tended to make the minimum of regular commitments for another reason. It is a distinct business advantage to him to be able to give saleable time or not according to the situation in which he has found himself from week to week. In any case, his service to education has suffered because of the scattered and tentative nature of many of his contributions. His total assembly of offerings has been brilliant in spots, but too disorganized, fitful, and miscellaneous as a whole.

If he is now to embark upon a more closely organized and better integrated practice, if he works toward assuming full responsibility along with the authority he possesses, one can predict that most of the mistakes and abuses of the past will quickly disappear. Also, the path of the broadcaster himself, as well as that of the educator, will be an easier one. For power without responsibility will not do; and if commercial broadcasting can not act forcefully and creatively, it is safe to say that it will be headed toward the closer governmental regulation which

it wishes to avoid. On the other hand, a growing and intelligent acceptance of obligations in the educational field will promote good will and satisfaction among educators as among other Americans. "The Government's use of authority in exercising its responsibilities for educational broadcasting," recently declared John W. Studebaker, "will be great or small depending upon the degree to which the broadcasters serve the public welfare." Fortunately the men who control the radio industry are both intelligent and vigorous, and the outlook for the future seems favorable. Many signs point to constructive changes even within the coming year.

It is fitting to add here a word about advertising. We have seen that this aspect of American broadcasting has aroused the anger of many educators, as well as of writers and individual listeners. Its cultural effect upon the radio program as a whole is important. But it affects education only as it disrupts serious programs, as it may hurt sponsored programs of an educational character, or as its offensive nature in programs adjoining fine music or informative talks or notable drama may offend hearers and mar the impression made by such broadcasts. When the educator criticizes the amount or kind of advertising carried by sponsored programs, he acts usually as a citizen seeking to improve the social life of his land, and not as an educator.

However, it is pertinent to observe certain tendencies on the part of the networks and stations in regard to advertising. We have seen that the character of this grew worse during the depression. But as times grew better, both the national networks which were then operating gave their attention to the betterment of advertising. N.B.C. acted first. In January, 1934, it issued a booklet defining its policy to its advertisers and listing



certain requirements which they must meet. These included abstaining from false statements, false testimonials, misleading price claims, references to competitors, obscenity and doubtful language, etc. A little more than a year later the Columbia Broadcasting Corporation took a more decisive action by announcing both to the public and its sponsors an unusually explicit code of advertising practice. Because of its comprehensive character, its full assumption of responsibility, and its wide circulation, this code was an event in broadcasting.<sup>2</sup>

The new program, dated May 15, 1935, barred certain types of products from the air: deodorants, depilatories, and laxatives, for example, and forbade descriptions of bodily symptoms or functions which were graphic or repellant or "generally not considered acceptable topics in social groups." It imposed maximum time limits on the amount of advertising in quarter-hour, half-hour, and hour programs. It proposed to tolerate no misleading or untrue statements, gross exaggerations, disparagement of competitors, unauthenticated testimonials, lotteries, or too frequent mention of prices. It announced its intention to guard carefully the type of children's program which it put on the air.<sup>3</sup>

Meanwhile, many individual stations have improved the quality of their advertising. On the other hand, not a little

<sup>2</sup> The announcement was embodied in a pamphlet, *New Policies: A Statement to the Public, to Advertisers, and to Advertising Agencies*.

<sup>3</sup> Columbia permitted 10 per cent of program time to be used for advertising at night, plus 40 seconds extra in 15-minute programs. In daytime hours, 15 per cent could be used. This made 2 minutes and 10 seconds of advertising matter in 15-minute nighttime programs, 3 minutes in half-hour programs, and 6 minutes in hour programs, with proportionately larger allowances in the day time.

objectionable material is broadcast: the amount of advertising is often large in proportion to the program presented; and the use of "spots" (individual advertisements sandwiched between programs or lumped together) is often annoying. These sometimes come in like firecrackers interrupting music or speaking on a Fourth of July—or with a worse effect, for firecrackers may be considered appropriate by Fourth of July audiences.

It is safe to say that further progress will have to be made in the improvement of advertising before it can be said to be inoffensive. The way has already been shown by many sponsors who use less than their allotted time and are satisfied with the results they get. The industry is still seeking improvement in this direction. It probably stands in the same position with regard to advertising as it does with regard to education. If it continues the process of reform, it will meet with public praise and approval. If it ceases to go forward, it may face a renewed public protest and perhaps find itself under the regulation which thus far it has studied successfully to avoid.

## Things Done Ill or Well

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WHEN all the significant things have been said about the limitations under which educational programs have been produced, we come back to the programs themselves. What do they represent in modern radio? What has been the amount of them in comparison with other important features of the broadcasting schedule, and what has been their quality?

When we ask ourselves how much of this material has been broadcast, we must remember that the average and even the exceptional listener demands many services from the radio besides an education. Nor would he sacrifice certain other offerings in order to have the programs which instruct him. Even educators want news broadcasts. They want light music also, accounts of sporting events, and comedy. All of them wish to listen to certain special features—broadcasts of commencements, testimonial dinners, floods, coronations. Their children, if young, demand children's programs; if older, dance music. There is a vast amount of radio activity which tends to squeeze education into justifiably narrower quarters than it might occupy if a broadcasting station were not a combination of newspaper, magazine, theater, and concert hall as well as school room.

Because of the pressure of other radio features, education on

the air for some years diminished measurably in amount. In 1935 Kenneth Bartlett of Syracuse University, New York, made an exhaustive study, still unpublished, of the radio programs of three stations serving the Syracuse area. His effort was to make an objective picture of these programs. One of his activities consisted in classifying the broadcasts of these stations into three general categories—light entertainment, serious entertainment, and programs of special interest. Most of the educational programs fell into the second of these three classes. By using data collected in earlier years by Herman S. Hettinger, of the University of Pennsylvania, on the types of material broadcast, Professor Bartlett was able to trace from 1927 to 1935 the changes in the proportions represented by each group in relation to the entire radio program. He found that in 1927 light entertainment represented but 45 per cent of radio broadcasts, serious entertainment, 50 per cent, and features of special interest, 5 per cent. By 1931 the proportions had changed to 55, 35, and 10 per cent respectively. In 1935 light entertainment constituted 60 per cent of the whole program, serious entertainment but 25 per cent, and features of special interest, 15 per cent. Since the three Syracuse stations had the offerings of three different networks, their programs were fairly representative of the industry as a whole. The result suggested that the art of entertainment had progressed steadily and rapidly and had pushed out more serious material, probably because this material had not shown a parallel artistic proficiency. An analysis for 1937 would possibly show that education and other serious broadcasts had won back some ground. Various types of educational programs have increased in number on the better stations. One would guess that today there is more good music, more good public discus-

sion, more economics and sociology, more biography, and more broadcasts on health and psychology than there were in 1935. There is probably also more attention to science, pure and applied, and as much if not more being given to literature and art, to domestic science, and to definite lessons, whether in music, mathematics, languages, or various school subjects.

The question of whether there is "enough" of these various subjects will naturally be a matter of opinion. My own would be that a number of fields are adequately represented at the present time in mere quantity: music, public discussion, and biography, for example. Others, like science, literature, history, and art I personally feel are still insufficiently represented.

But the question of the quality of these programs is far more important than that of their quantity. Quantity may be an indirect means, through wider practice, of inducing quality; fine quality certainly promotes immediate imitation and tends to raise standards in any field where it is apparent. As standards are raised, more time will be taken from other fields. Thus, a successful program on art might push out some border-line popular entertainment.

And the most significant phase of recent broadcasting in educational fields has been an almost startling improvement in quality. Things which had already been done well have of late been done better than ever before, and things never done successfully have emerged into a sudden artistic maturity.

This is not to say that improvement has been universal, or that there have been few dull or faulty educational programs. There is still plenty of room for progress even where there has been positive success. And the proportion of poor educational programs is still discouragingly large.

We have already indicated why many educational programs

are essentially failures. A tremendous number are broadcast by speakers who, because of poor voices and dull presentation of material, could never win an audience. Others are presented by speakers or groups who have potential talent, but who, through unfamiliarity with the radio or poor planning or writing of material or all three, fail to do justice to themselves. Still other broadcasts are perfunctorily prepared. Some of the promising but unsuccessful programs might be lifted to distinction were there adequate payment for performers and closer attention to production. Finally, from "pressure groups" there have come too many alleged educational broadcasts which are propaganda rather than education or which skirt the edges of profitable subject material. Yet the broadcasting by public organizations has improved rapidly. The National Congress of Parents and Teachers, the American Medical Association, the General Federation of Women's Clubs, and a number of other groups have given over efforts to deal chiefly with the work of the organization as such and have presented in lecture, dramatic, or discussion form important problems of interest in their respective fields. Here the broadcasters have taken a definite role in educating their studio guests and, as previously indicated, have sometimes furnished direction and music at no little expense to themselves.

However, within the jungle of dull lectures hastily prepared by tired teachers, amateurish dramas, mediocre music offered by college boys and girls, and dull recitals by public organizations, one finds in almost every field of radio education some outstanding accomplishment in presenting material that will stimulate men and women to learn, or that will actually teach them.

For example, presenting science has been a difficult task often

resulting in failure. Yet anyone who listens to a recording of the University Broadcasting Council's broadcast on van Leeuwenhoek (perhaps more important as biography than as science) will perceive that one agency for arousing the interest of listeners in scientific work has been created. The Office of Education program, *The World is Yours*, manages also to wed scientific information to everyday uses and to the dramatic crises of human life. I can say much less for other programs dealing more directly with science of various kinds. Perhaps some that I have not heard have been outstanding. This may be the case with the programs of the Carnegie Institution at Washington or the University Broadcasting Council's *This Friendly Earth*.

One need not search long for outstanding programs in the fields of popular economics and sociology. America's *Town Meeting of the Air* (N.B.C.) and the University Broadcasting Council's *University of Chicago Round Table* stand out as types, each in its way creative and professionally notable. Programs of this type are epochal for education in clearly demonstrating the capacity of informative discussions to take the air in evening or Sunday hours against the most attractive popular entertainment. They will not draw audiences as large as the liveliest comedy or variety shows, but they will attract and hold their millions, and their effect on American life is likely to be marked as time passes. Some of the *Town Meeting* programs, now with nationally known speakers, now with others unknown, stir the radio listener and leave him tingling with ideas, the sense of personalities, and unanswered questions. A different and even solidier type of broadcast was successfully achieved in a number of the NACRE's programs in the *You and Your Government* series. Here bringing to radio listeners authoritative

speakers who were often successful broadcasters proved advantageous. The Federal Radio Project's program Let Freedom Ring (C.B.S.) made a distinguished place for itself among features dealing with social problems.

Psychology on the air has been notable for its inquiring experiments rather than for programs achieving outstanding success. But many of its broadcasts on personal conduct (Raising Your Parents, the Court of Domestic Relations, and the Voice of Experience, for example, as well as popular lectures on psychology) have indicated a particularly fruitful field for radio. I shall have more to say of this.

One could find in literature and drama (the recent Shakespearean broadcasts, Treasures Next Door, John C. Scammel's lectures on Building Literature, Living Dramas of the Bible, and certain broadcasts from the C.B.S. Workshop) a number of programs which have put new life into the idea of broadcasting the work of great writers. Literature on the radio is due for a new birth. The lecture will come back in this field, probably with the use of dramatic "spots." Radio has rather overdone dramatization and needs to learn that measure which Homer has Menelaus call best in all things. Biography has already found its vigorous flowering, producing under the hands of directors like Allen Miller and Meredith Page some of the most stirring artistic performances that the microphone has known. In history, a field for some reason less fully worked, one has to go to Hendrik van Loon's recorded but hitherto unused programs to find the best of accomplishments to date. Agriculture, with its valuable services to farmers, often sends school broadcasts, domestic science, lessons for adults from educational stations. All these and other fields have seen accomplishments that point the



way to a fuller success and sometimes are already successful. Then there is music—on which I shall defer comment. As Chaucer says: "What needeth there to sermoun of it more?"

The better performances in educational broadcasting have represented to a large extent the development of certain techniques and the employment of persons well suited to accomplish good work.

Progress in adjusting the studio's technical facilities to the work done has been important. Much has been learned about what kind of studio conditions are needed. The idea that "dead" walls are desirable has completely given way to experimentation that shows a certain "liveness" and spaciousness to be most effective. The Columbia Workshop is carrying forward special experiments with studio size and resonance of which its work with *The Fall of the City* was merely representative. Again, the use of different types of microphones, of sound effects, and of the position of speakers with regard to the microphone have all come through experimental stages to a profitable maturity.

The whole problem of conceiving and preparing a program has been partially solved and is in process of further solution. The importance of attractive titles is recognized by the abler producers. The necessity for employing talented writers for the more creative programs is getting some recognition.

This recognition will have to go further in the educational field. The pay for script writers working in this area is often scandalously low. In San Francisco one program manager boasted of being able to buy scripts for \$5 apiece. The networks often pay but \$40 or \$75 for scripts for half-hour sustaining programs—a much lower rate, considering the kind and amount of work, than is paid by reputable magazines. In contrast, com-

mercial programs often pay high prices and procure the services of gifted dramatists and fiction writers. Education in the main has got what it has paid for. Fortunately, it has paid well at times. Again, it has provided an opportunity for promising young writers. But it will have to buy artists if it wants art; and art is often needed. Here stations and educators alike will have to wake up and create more fine programs by the method which has already created the greater number of them: adequate remuneration. Recent network practice promises to provide better payment. They have paid high fees to certain writers of sustaining programs—as much as \$1,000 a script. And the results have justified the payments!

Again, educational broadcasters have profited greatly by adapting from the best practice of the stations and networks certain art-forms which have become valuable implements for them. The use of dramatization has been one of these. The discussion, the panel, and the forum represent others. The recognition that lectures must be adapted in length to the skill, knowledge, reputation, voice, and magnetic qualities of the lecturer has represented a step forward. The Office of Education's experiments with the use of choral effect, varied voices, and the intermixture of drama and announcement have opened creative possibilities in form. But much study, experiment, and inspiration are still needed in improving the artistic quality of the educational program. One educational director intends to experiment boldly with stronger emotional appeals. He feels that the approach of the educational program, especially of the stimulating as opposed to the teaching type, is altogether too intellectual.

We should remember in counting accomplishments that

broadcasting has done certain things which already entitle it to honor in education. It has brought back discussion to America in a new and vivid way. A nation that ten years ago was bored with politics and ill informed on the questions that troubled it, is today alert and vitally interested in public matters. This, in part, is due to the depression and the consequent intrusion of government into our everyday lives. But radio has played a particular and distinguished role in serving the awakening public. Its forums and panels and round tables have brought back the spirit of the traditional local gathering, without the pettiness and wrangling of that type of meeting. Radio has manifested in certain respects a greater power than the press because it has been able to bring the best speakers to millions, to dramatize discussion and to keep it colorful and personal.

Yet its pioneering in psychology will in the end perhaps prove more memorable. Here is a field which was once the heart of all educational systems. How to know good conduct was the aim of Confucius, of Plato, of the mediaeval schools. Somewhere in the nineteenth century education abandoned the teaching of conduct, and only of late has it cautiously brought the doubtful subject into the schoolroom for examination. But broadcasting has charged in where schoolmen have long feared to tread. The discussions of specialists on parental problems, the dramatized stories, and the personal consultations which it has thrown out to the millions seem to have answered definite hungers that had long been but half expressed. Much of this work is crude; it has still to attain sureness and dignity. But it is direct and carries a conviction of reality and need.

Other work has been notable as an extension of existing education. Radio has been the specialist's and educator's miraculous

tool for giving immediate and practical guidance: advice on spraying and planting and cultivating at times when it was most pertinent; frost warnings; needed instruction about health; direct talks with homemakers. No other agency for information could bring such immediate contacts as radio has afforded. Also, it has popularized knowledge by acquainting Americans with their land and their great men and other lands and their notable personages, living or dead.

Finally, radio has had its most notable crusade in the re-creation and extension of the love of music.

Music has been what modern slang terms a "natural" for broadcasting. From a high-fidelity station through a finely designed receiving set, it comes to the listener with little loss of quality. Even through the cheapest instrument it can be transmitted with its essential character preserved. So it has come often; and with each year there has been a noticeably greater discrimination on the part of many hearers. Semiclassical and classical music, once deemed too high-brow for broadcasting, now spots the programs of countless stations. And opera, symphonies, choirs, and instrumental soloists of the finest character can be heard in almost any American city. In our metropolitan areas the listener's choice of programs has become a rich one. Through such programs as Dr. Maddy's band lessons, N.B.C.'s Home Symphony, and broadcasts arranged by Arthur Garbett in California, men and women and children have also been stimulated to take up the playing and even the composing of music. It should be added that in music the industry has been the great educator, boldly assuming its full responsibility. Both networks have done distinguished work in broadcasting symphonies, the best singing, and programs interpretative of music.

Musicians are not satisfied with radio's contribution to musical appreciation. Many listeners are still far from satisfied. They demand a fuller selection of the finest and turn to stations like WQXR in New York and KECA in Los Angeles, where they can get more of what satisfies them. The N.B.C. has acknowledged such feeling by its arrangement to bring Toscanini back to America. C.B.S. and M.B.S. strive with an equal intensity to gratify a growing demand. The teaching of music, first popularized by Walter Damrosch, finds recurrent expression in many programs. Columbia's experiments in enlisting distinguished composers to write compositions especially for radio have opened up new possibilities for a new manifestation of a great art.

When we remember how young broadcasting is, its more notable achievements stir the imagination. There is no subject that has not been touched in a way to foreshadow not only high accomplishment (which has been reached in the best efforts) but also a type of daily service which could represent high art devoted to modern needs through a modern agency. As builders of education, broadcasters and educators find themselves with the sample materials for constructing a noble hall of learning. The task is partly to improve certain designs and vary them as the walls go up; but it is mostly a task for an architect, for it is in putting the beams and stones into a triumphant relation to each other that we have failed most desperately to date. In the accomplishment of this task we shall need imagination and courage and persistence in the future.

## Allies of Radio

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WHAT was this danger which threatened the lovely and reckless Daisy Miller?" demanded the voice of a radio announcer at 4:14 P.M. on March 22, 1937. "And did she go to the Coliseum in spite of the warning? We have no time to answer these and other questions, but you can finish the story by yourself. Henry James's books are in your own public library."

Somewhere out over the American land some tens of thousands of listeners to Treasures Next Door made a mental memorandum. A few thousands snatched a pencil and paper and made a jotting. But the announcer had not finished. "Would you like to have a free publication called *The Private Life of Henry James?*" he asked. "It will tell you many interesting things about this American author. For instance, did you know that Henry James wrote in two utterly different styles? Why he changed his style of writing midway in his career, why he gave up law school, why he decided not to live in America—you will discover in this little leaflet. Just drop us a note—a post card will do—saying: 'Please send me *The Private Life of Henry James.*' Address your letter or post card to Treasures Next Door, Office of Education, Washington, D.C."

This actual transcript of the concluding words of a recent educational broadcast leads to a phase of education by air

already touched upon, which needs to be examined in more detail if we are to get a full sense of the activity going forward in the entire field.

As early as 1928, N.B.C. distributed printed aids to listeners for its Music Appreciation Hour. Columbia was busy in 1930 supplementing its American School of the Air broadcasts by free printed materials. These were the first notable efforts of which I know to fortify broadcasting by published information made available to listeners.

We have seen that in 1931 the National Advisory Council on Radio in Education had set itself to increase the efficiency of its broadcasts, both by advance publicity and by informational material to be supplied on request, either free or for a nominal sum. Two of its most elaborate publications were the books relating to its art programs: *Art in America from 1600 to 1865*, and *Art in America in Modern Times*. These publications were of ample page size, contained many illustrations, some in color, and an explanatory text. They sold in paper covers for one dollar each and were purchased by 23,325 people, although the two series were put on in the depth of the depression. Materials for the majority of the NACRE programs were supplied free.

The issuance of supplementary printed matter recognized the essential character of radio as it related to teaching. The program was sent over the air; in fifteen minutes or half an hour it was gone, leaving unanswered questions with many listeners, and a sense of facts and ideas too rapidly heard to be accurately remembered. Printed material could refresh the memory and provide guidance for reading or for inspection of museum exhibits. It was, therefore, a logical partner for the spoken word.

The Office of Education has regularly supplied printed

"helps" to listeners. So have N.B.C. and C.B.S. So have many college stations, and groups broadcasting from commercial studios on health, psychology, music, economics, and other subjects. For many of these educational agencies, the broadcast is only a beginning. America's Town Meeting of the Air has a special staff whose time is devoted to answering inquiries. It sends out about 50,000 copies of advance material to listeners already recorded as expressing an interest in the programs. In addition, the American Book Company, through a cooperative publishing arrangement, sells for a nominal price from 5,000 to 20,000 copies of the broadcasts each week, the demand varying with the week's program. The National Music League also welcomed requests for information about its program, Music and You, and has dealt with all queries received. The Federal Government maintains a regular service in connection with its National Farm and Home Hour. Innumerable other societies, colleges, and state and city departments similarly prepare listeners for broadcasts and help them to enlarge their knowledge of what they have heard by reading.

Potentially, the public libraries of the United States are the most powerful allies of the educator by radio. To be sure, they have found a distinct function in broadcasting in putting programs on the air. Hundreds of libraries in all parts of the United States have broadcast programs. In Los Angeles, Cleveland, Albany, Baltimore, Rochester, Buffalo (where the Grosvenor Library has given particular attention to radio), Cincinnati, Kansas City, Denver, El Paso, Nashville, Washington, Needham, and Indianapolis, to mention a few cities, regular programs have been developed, differing widely in character. Some of these have been already noted. Mrs. Faith Holmes Hyers, who



has broadcast a program in Los Angeles which is now a paid sustaining feature of Station KFAC, has gathered such experiences together in an interesting manuscript report to the American Library Association, which I was permitted to examine. This may later appear in published form.

However, after some years of experimentation there has developed a strong feeling on the part of the Association that broadcasting is not a public library's most important service to radio. Rather, that service is considered to be the creative assistance which libraries can render to broadcasters and to listeners hearing educational programs by providing reading materials relative to broadcasts. "Libraries have spent too much time broadcasting," says Carl H. Milam, Secretary of the American Library Association, "when they should have been doing their most important job—cooperating with educational broadcasters and meeting the demands created by their programs among listeners." The Association is now devoting itself to stimulating library activity of this kind.

One step which it has taken has been to request the networks and individual stations to include at the end of educational broadcasts a statement such as the following: "You will, of course, want to read further on this subject. Ask your nearest public library or your state library commission to suggest the names of books and other reading matter."

To enlist individual libraries in the role of allies of broadcasters is not an easy task. The microphone often embarrasses the librarian. During the depression, when his funds were low, he was inclined to fear the stimulative power of radio. In many places he still fears it. The program which leads the listener to books will often send a crowd to the library, all clamoring for a single volume which, the staff knows, will be in

little or no demand when six months have passed. In such cases, the library can not supply copies in quantity. Even if the volume requested promises to have lasting value there is often no money to stock it for an emergency demand.

Again, the library staff may be severely taxed meeting the inquiries of new-born book lovers. Even where readers' advisers give a special information service they may be unable to cope with a flood of inquiries and desired consultations.

However, these problems are being faced. When a library broadcasts its own programs, it tends to create the very problems created by other enthusiastic educators at the microphone. A number of methods have been devised to serve radio listeners who have turned readers and even to stimulate readers to become radio listeners, and thus to read more intensively.

For example, radio book shelves have been established in many cities. These contain copies of the books discussed over the air. Readers are provided with seats nearby and are invited to examine these volumes. If copies are available, they can then borrow them. This practice tends to concentrate reading stimulated by radio and partially takes it off the shoulders of those librarians who already have their time filled with regular duties. As budgets have increased with the return of better times, libraries have sought also to supply a larger number of copies of books in demand. The Los Angeles Public Library purchased five hundred copies of *Gone with the Wind*. In a number of municipalities, where city ordinances or the charters of the libraries do not forbid, a small fee has been charged to help carry emergency purchases. Through the radio and other influences public libraries have thus taken on, in modified fashion, the role of paid circulating libraries!

But ministering to the reader is not the library's only task. In

hundreds of cities it serves the script writer of the broadcasting station by furnishing him with materials necessary for the creation of programs dealing with regional history, biography, art, special events, literature, and even radio drama. To certain educators it has also furnished bibliographies which have been used to supplement broadcasts and have been distributed in some instances as a part of the publicity for programs. The New York Public Library has compiled lists for America's Town Meeting of the Air and for a number of the programs of the Federal Radio Project.

The museum, as well as the library, has taken a definite place as an ally and beneficiary of broadcasting. The Newark Museum has a regular program announcing its varied services: its exhibits, crafts classes, lectures, and musical events. The Metropolitan Museum of Art has used radio facilities. In Washington, D.C., the work of the Smithsonian Institution has been made the basis of the Federal Radio Project program, *The World Is Yours*; and over N.B.C. networks the Carnegie Institution has told of its work. The Hayden Planetarium at the American Museum of Natural History has conducted regular broadcasts on astronomy entitled *The Drama of the Skies*, over Station WABC and the C.B.S. network. With the initiation of a program called *The Hobby Club*, on Station WHAM, the Rochester Museum of Arts and Sciences recently joined the ranks of the broadcasters. The Oriental Institute of the University of Chicago launched a series of programs on archaeology in the spring of 1937. We have already noted some of the broadcasts of the Boston Museum of Fine Arts, which has conducted three extended series over the Colonial network.

For broadcasts on painting, handicrafts, sculpture, musical

instruments, archaeology, folk culture, and a dozen other subjects, obviously the museum can be an invaluable supplement to the radio. It can lead the listener from the general to the specific, completing processes of inquiry and stimulating new ones.

Another agency which has promised much for broadcasting is the listening group. Indeed, it has promised far more than it has yet performed. This means of collaboration with the radio educator appeared early on the scene. In Europe it has led a fairly active life, although actually it seems to be less important than it appears to Americans when magnified by rumor and distance.<sup>1</sup> While it has by no means been unimportant in America, it has not achieved great popularity here, chiefly because there are radio sets in ninety per cent of American homes, and the listener's usual impulse is to hear a broadcast in his own living room rather than to journey to a store, school, or other meeting place and listen as a member of a group.

Nevertheless, there are groups. When the NACRE programs were started in 1931, the importance of stimulating organized discussion of the various programs was recognized, but such funds as were available seemed necessary for other purposes, and no systematic effort to promote listening centers was undertaken. However, groups sprang up spontaneously. The You and Your Government series brought members of the Y.M.C.A.'s, adult education associations, college alumni clubs, local leagues of women voters, and a number of schools and colleges into or-

<sup>1</sup> The British Broadcasting Corporation reports four hundred and seven discussion groups in existence during the spring of 1937. As will be seen later, American groups are much more numerous. However, the above figure probably takes no account of many special groups which do not report their activities officially.

ganized discussion activities. These sometimes represented gatherings called to listen to the broadcast and sometimes meetings held after the broadcast, to which individual members of the group had listened in their homes. The NACRE received many letters describing such activities.

Some public-spirited organizations have made a point of promoting groups for the hearing and discussing of certain broadcasts. The National League of Women Voters, according to Tracy F. Tyler, as early as 1932 had established 91 groups, with 1,100 members. The National Congress of Parents and Teachers has been similarly active. In 1934 in New Jersey alone it promoted, in connection with Rutgers University and the New Jersey College of Agriculture, some 352 groups representing 4,300 mothers.<sup>2</sup> The Congress has at present groups of listeners in 30 states. There are 1,765 of them altogether, Texas alone having 1,000!

One could list a large number of organizations manifesting such activity in a more informal way or on a smaller scale. In its efforts to study the character of radio programs, offer helpful comment on their trends, and make annual awards, the Women's National Radio Committee has dealt with a large number of national women's organizations. Unfortunately, the Committee does not have direct contact with the groups established by its many subsidiary organizations and has made no census of the total number of these groups. Also, in many cases, listening undertaken at the request of the Committee has not been done by groups but by individuals, and discussion has been concerned with series of programs and trends rather than with individual

<sup>2</sup> *Education on the Air . . . Radio and Education*, 1935, edited by Levering Tyson and Josephine MacLatchy. University of Chicago Press, pp. 168-82.

broadcasts. This activity has been specially significant in that it involves a conscious social purpose.

Educational stations have had organized groups of listeners. Station KOAC, at Corvallis, Oregon, regularly serves gatherings of mothers with broadcasts on parent problems; Ohio has been active in organizing groups of members of interested associations; Iowa, with two college stations, has a number of listening centers; the University of Kentucky has done a special type of work among the mountaineers, where radio facilities are few and the necessity for group listening is greater, therefore, than in most regions. Finally, there is scarcely an outstanding program of national educational interest that does not have its spontaneous little assemblies of followers who listen to it and discuss it. Those responsible for America's Town Meeting of the Air have made no effort to promote listening groups, but from the letters coming to headquarters the staff is cognizant of several hundred bands of regular listeners. Some of the programs of the Federal Radio Project have stimulated similar activity.

The listening group is educationally important in several ways. Often it is in charge of an informed leader who can give the listeners a better setting for the program than they might otherwise have. Then, through the medium of discussion it stimulates thinking, provides references to pertinent books and pamphlets, and often supplements the purely informative aspects of the program. It is a natural "follow-through" agency, making for continued interest and a thoughtful application of what has been heard.

Perhaps the schools and colleges supply the largest number of American listening groups. A census of class discussions of broadcasts would probably reveal the existence of tens of thou-

sands. Most of these are held after the event, the teacher asking students in advance to listen to certain broadcasts and report upon them. Many schools now follow closely the lists of forthcoming educational programs. These are often listed in educational publications like *The Ohio Radio Announcer*, published by the Ohio State Bureau of Educational Research. School activity has, of course, no direct bearing on adult education, but it offers examples of listening groups in action and shows the value of discussion.

Broadcasts made directly to schools also offer examples of small assemblies of listeners who hear the programs and discuss them. The experiments of the schools with several different types of educational programs will in the end help to guide adult educators who lack the facilities for dealing so arbitrarily with their students. There are in general two types of school programs. One is calculated to supplement the regular work and covers such material as the student might find in his assigned reading. The American School of the Air and the Ohio School of the Air have in the main presented this type of broadcast to their listeners. The other type has the character of an actual lesson and its purpose is to help the teacher by showing what can be done by a "master" educator and to bring to the student a different instructor and a superior type of organization and presentation. There has developed a violent disagreement among teachers as to which of these types of programs is most useful. (One might place in a third classification, although it is usually of the supplementary type, the "actuality" broadcast, where a factory or municipal office or hospital is visited or a significant event reported.)

Despite the existence of a considerable body of expert opinion

to the contrary, I venture to say that both types of broadcast are profitable. The sole question is not, as has been asserted, whether radio can offer something in such work which the regular teacher can not give. If it can, and often this is possible, that is good. But if it represents an agency for quickening interest, giving variety, and stimulating discussion, it has a legitimate place in elementary and secondary education. The same would be true of comparable programs in the field of adult education.

I was somewhat skeptical of what radio could offer the schools until I listened to three broadcasts in Rochester, New York. Two of these were not notable for their interest or for the material presented. Nevertheless, it was apparent as one watched the children that the programs represented definite events to which they had looked forward. And the method of using the broadcasts has been of a character to increase their usefulness. In a fourth grade the students took notes on what they heard. A student chairman then made a report on the program, asking questions based upon the information it contained. Individual pupils answered and discussed the questions. Volunteers from the floor were then permitted to ask supplementary questions. The entire group of twenty-odd children entered into the activity with spontaneous zest. When they had finished with the program, there was little in it that they had not canvassed. With better presentation the results would have been even more significant, but they demonstrated clearly the advantages of this new type of instruction. Adapted to an adult class, or to spontaneously organized groups of adults, such activity has unquestionable possibilities. The entire work is still in process of development, and we shall know more about it as experience shows the way.

In America it seems to me probable that a wholly different



kind of listening group is likely to occupy a most important place. It will not be a group that comes together physically, either to hear a broadcast or to discuss it afterward. It will consist of persons who listen in their own homes as individuals. But they will represent a group in that their existence will be known by correspondence or actual registration at the radio station sending out educational material. Let us call this type the registered group.

We may refer to Station WOI at the State Agricultural College at Ames, Iowa, to see how such a listening group is developed. Some years ago there was a demand from radio listeners for a book service, comprising the distribution of important current books and reviews of them to listeners. The station announced that it would organize a book club if at least 100 listeners would send in their fees. The club, however, it was announced, would be limited to a maximum of 500 subscribers. Within a few days 231 checks had arrived, and the club was launched. It sells to each member 20 books, to be taken at any time the member may choose. When these have been read, the listener can then renew his membership at a slightly lower rate. To date, the station has served 2,119 club members. One woman has renewed her membership fifteen times and has read 308 books. Many members are in parts of the state that have no library service.

The advantages of such a group for the educator are apparent. He knows he has a definite audience. If money is necessary for materials, he can secure it. Advance and supplementary materials can be sent to students. The station can ascertain the number of listeners to educational programs. Naturally, it can not measure the total audience, for many will listen who do not register. But the usefulness of the program is established.

It has already been reported that Station W1XAL has had two groups of this type in radio and in photography. The Wisconsin College of the Air, Station WHA, and the Ohio Junior Radio College, Station WOSU, have larger groups employing similar methods. Wisconsin's registration for 1936 was 16,000. Hundreds of language lesson courses have their registrants. I found a Chinese program for American businessmen thriving on Station KECA in Los Angeles! In all parts of the United States I found courses with registered members regularly receiving lesson aids by mail. Yearly, 10,000 sets of the Maddy Band Lessons are sent to individuals and groups who regularly perform on musical instruments. Many of the groups have dozens of members. The number of listeners who follow the lessons and play in connection with them is far greater than the number of those who request materials.

Most of these courses teach actual lessons comparable to those given in classrooms. Having heard a number of distinguished educators and important radio officials announce that we could look for nothing but stimulus in radio teaching, I was amused at this quiet heaping up of evidence to the contrary. Make no mistake about it—radio education will stimulate, but it will also teach. The teaching has already begun and is progressing with an accelerating momentum. It may comprise chiefly the activity of smaller stations that can reach only a few thousand listeners, but it already serves, and in time will serve more extensively, tens and hundreds of thousands.

One should not leave the subject of allies of radio without referring to the Radio Institute of the Audible Arts, which was founded late in 1934, flourished impressively for a year and a half, and was cut down in a vigorous youth by its founders. The Institute was a creation of the Philco Radio and Television Cor-

poration. Pitts Sanborn, nationally known music critic, was its director, and Kathleen Goldsmith its executive director. The Institute sought "to stimulate wider and more active appreciation of good radio programs among the American people." An advisory committee of notable educators and professional workers in radio and music was appointed to assist the officers. The Institute published free booklets on broadcasting activities and lists of good programs; it furnished information to teachers; it stimulated the formation of listening groups; and it cooperated with radio stations in publicizing educational programs. In discontinuing this more than promising effort, the Philco Corporation announced that its original aims had "in great part been accomplished," but this assertion was not true. The Institute left a gap which still exists.

All the aids to radio education are important. The work of teaching by air waves can not become fully developed without its allies. They will become increasingly valuable. Through them the inspirational effect of the expert's voice, of the stimulating biographical drama, of the symphony or poem or play will be carried on, for a minority of listeners, into reading or observation or study. The radio station will become the office of a vast correspondence school which will profoundly affect the lives of many individuals and the general character of American culture.

## What Do They Learn?

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MODERN adults learn more by listening than by reading. At least, this is the report which experimenters make. Paul T. Rankin found in 1929 that in processes of communication the percentage of time spent by men and women in writing was 9 per cent; in reading, 16 per cent; in talking, 30 per cent; and in listening, 45 per cent.<sup>1</sup>

It may be assumed that radio has increased the amount of time spent by adults in listening; we have seen that families with radios have their receivers in operation 5.1 hours per day and that estimates for individuals, based on questionnaires, suggest that their radios are tuned in from 2 to 5 hours per day. The habit of learning by listening is an old one. It has been followed diligently by philosophers like Socrates, writers like Shakespeare and Whitman, captains of industry like John D. Rockefeller, and statesmen like Jefferson and Lincoln, to say nothing of the mass of mankind. Books can be thought of essentially as a means of extending the listening process through the eyes. Most men and women recognize a kind of substitute value in them; people learn most readily from the actual lips of other men and women.

The radio as the agent of modern science has intensified the

<sup>1</sup> *Proceedings of the Ohio State Educational Conference*, 1929, pp. 172-83.

listening process. Psychologically, education by air should represent an easy avenue to learning. But when we turn to gather evidence as to what profit the attentive millions get from teachers at the microphone, for the present we find ourselves with less data on this question than on any other phase of broadcasting. Accordingly, the following pages, which one would like to find the richest in information about adult education by radio, will be relatively barren.

I have pointed out in defining the nature of educational broadcasting that even what is learned by students through the regular classwork of our schools is difficult to define. Yet what we know about methods of teaching and the probable results to be expected would enable us to make some fairly safe guesses concerning the effect of educational broadcasting if the type of curriculum, the processes used, and the conditions under which learning goes on were similar in radio to what they are in formal education. But they are different, and we know less about education by radio because of the differences.

There are, of course, marked similarities between subject matter on the air waves and subject matter used in formal education, for most subjects that are taught by radio are found somewhere in the curricula of our schools. But there are two facts about educational broadcasts which bring them into sharp contrast with the regular academic curriculum.

One is that almost all radio teaching for adults (what follows is not true of school broadcasts) is teaching for beginners. Not beginners in education, but beginners in the particular fields in which instruction is offered. As a matter of fact, one might say that most radio education is aimed at an audience with about nine years of schooling but with adult experience. This is not to

say that few college graduates would find it profitable. Quite the contrary. But any adult with some high school experience could follow almost any radio teaching program, and there are seldom programs addressed to groups that have done some groundwork in a subject and want to go further with it. Possibly this condition will change as education by air grows older. But it has persisted up to the present time, and it places definite limitations upon our school of the air.

Again, while the subject matter of programs addressed to adults is similar to that used for schools (there are certain exceptions I shall presently note), it differs sharply from the school material in that it is much more fragmentary and much less complete. Often an educational broadcast comes as a single offering, like a lecture. Again, where there is a series dealing comprehensively with a theme, much is omitted. A series like *You and Your Government* would represent a pretty full course in practical civics, and *Titans of Science* would compare somewhat to a popular course in science for nonscientific college students. But in the latter case, information is subordinated to dramatic interest much more than in a university classroom, and great moments in the lives of scientists are given rather than a unified account of their work from century to century. To get a sense of continuity, we should have to add a great deal and make many connections for ourselves. This is characteristic of almost all radio, and I think that much of this character will remain. Radio mingles entertainment with information, builds up the reader's interest, and leaves him to fill in the facts if he will. Actual lessons, of course, have less of this character, but they retain some of it. And if the commercial broadcaster has his way, teaching by microphone will probably maintain this suggestive

character. This may be a good character for radio to keep; it is probably true to the conditions of the new agency and its audiences. But it is also on the way toward giving us something quite different in education from what we have had.

When we come to consider method, we find a parallel situation. We may set aside poor broadcasting and with it many imitations of classroom work. We shall find some broadcasts where the school methodology is used effectively, but we shall find in the most outstanding and popular types of education a sharp departure from academic practices. Who uses drama in classroom lecturing or discussion? Doubtless a few cases of its use could be found, but education by radio leans upon it heavily. Schools have always encouraged the use of art exhibits and the seeing of good plays and the hearing of good music as extra-curricular activities. Sometimes both music and drama are brought into the schools, though usually school conditions limit such practice. But radio education is full of distinguished exhibits of music and poetry and plays. Again, schools use discussion and debates, but not to the extent that radio employs conversations, panels, and forums. Moreover, the broadcasting practice, in the employment of such forms of teaching, contrasts with that of the schools in that radio seeks to assemble distinguished speakers, or speakers with special gifts as actors for its discussion programs, while formal education employs the students themselves. The better teaching broadcasts also show a much greater consciousness of the educator's obligation to his listeners than most classroom teaching does. While the best school teachers strive to hold the interest of their classes, the radio teacher, because he has usually a short time at his disposal, feels a greater obligation to interest and please his hearers. His work

tends, therefore, to be more an art than does school training, although as far as lectures are concerned the finest examples of college work and radio work would have many similarities. Finally, the use of hortatory announcements, choral effects, and orchestral music give much educational broadcasting a flavor quite different from education in the schoolroom.

As to the physical and psychological conditions governing the two types of teaching, they are perhaps farther apart than the church and the theater. Students assemble in a classroom in the presence of the teacher. They see him, and he observes them. Presumably, they have no occupation but that of listening to him. Often they can not leave without his permission. The teacher at the microphone, on the other hand, stands apart from his students, sometimes by a continent's breadth. He can not see them. He does not know the size of his invisible audience. He can not even hear a sound made by any of its members. And the radio listeners are scattered and often alone or with a few relatives or friends. They are usually in their own homes, not in a room dedicated to learning. It has been asserted on the basis of tests that two thirds of them are engaged in some other occupation while they listen or half listen; for those hearing educational broadcasts this might be less true.<sup>2</sup> They can be as inattentive as they please, for no instructor's eye is upon them; and they can completely dispose of their teacher by a twirl of the fingers.

These superficially stated contrasts bring out clearly enough the strange quality which education assumes when it hitches its wagon to radio. By all that we have previously known of teaching and learning, the combination is an amazing one. At times it appears to be teaching-in-motley. Yet its very fantastically dif-

<sup>2</sup> Cantril and Allport, *op. cit.* p. 103.



ferent character has more than occasional flashes of a fire that seems divine. Often, education by radio is more vivid than any education we have known. Considering that it is an instrument still half shaped, we shall do ill to scorn it. Yet any attempt to measure its influence must take account of its unique and powerful character.

School broadcasting will probably become a measurable activity long before broadcasting for adults. The latter will profit by what is discovered in the classroom. Already, however, some attempts have been made to gauge the results which may be expected from radio programs heard by men and women.

Unfortunately, the two most important efforts are only now getting under way. The Bureau of Educational Research at Ohio State University is in the initial stages of experimenting both with school and with nonschool listeners. The Federal Radio Education Committee is undertaking studies of listening groups, of school broadcasts, and of "The Essential Value of Radio to All Types of Listeners." These three projects, and the latter especially, should give much suggestive and some positive information on what listeners learn. Altogether, some \$55,000 probably will be spent on the three undertakings in the first year of research, \$35,000 alone on the study to determine the "essential value of radio."

What other work of this type is there which is in process or about to begin? Only answers to questionnaires and various testimonials in the form of letters. On the whole, these are so miscellaneous and indeterminate in character that it is useless to try to bring together the scattered bits of evidence and make any judgment from them. We learn, for example, that 67 per cent of a certain number of housewives feel that they receive

valuable information by radio on cooking, the care of children, and general health, and that 10 per cent of them believe their appreciation of music has been increased.<sup>8</sup> We discover that of 500 listeners to America's Town Meeting of the Air, 78 per cent said that they always or usually continued the discussions they had heard with friends or relatives, while 11 per cent claimed always to do supplementary reading, 24 per cent declared they usually did, and 55 per cent testified that they sometimes did. There are examinations given in certain of the lesson courses which have indicated that a student acquires about the same amount of knowledge as he does through a correspondence course. Letters offer much individual testimony which can reveal no more than a rather extensive and appreciative interest on the part of thousands of people.

However, we can get both a negative and a positive answer to the question of what is learned, although both answers will again be sharply limited, by considering in more detail the character of the instruction offered.

For example, radio programs as they are now constituted put pretty definite limits on what can be learned.

There is, for example, the limitation of broadcasting as an agency. It shuts out completely, except in supplementary material mailed to the listener, the use of visual aids. As we have seen, it also prevents any class discipline and the enforced attention that goes with it. Again, because of the nature of broadcasting, the interplay of question and answer is impossible.

The character of the material offered sharply curtails the pos-

<sup>8</sup> "What Do We Know About the Listening Audience?" by Herman S. Hettinger. *Radio and Education*, edited by Levering Tyson. University of Chicago Press, 1933, p. 59.

sible progress of students. We have noted that this material is often fragmentary, and in adult education the teacher on the air has thus far been limited to a rather general treatment of the subjects he discusses. The radio listener gets something like popular lectures, something like correspondence school courses, and something different from either—here I refer to dramatizations, discussions, and musical and literary exhibits—which has many fine aspects and often can be of value even to the highly educated person. Like most other radio material, however, it often suffers from being presented in a truncated form. Cantril and Allport's observation that classroom students come to realize "that true education is always a slow and arduous process," while radio students demand and receive a dangerously simplified type of teaching with "snap and vividness," is pertinent in a consideration of the kind of teaching programs the broadcaster offers.<sup>4</sup> The curriculum of the air as it has been developed to date is stimulating but usually superficial, and offers small opportunity, even with the help of libraries and museums, for students to "put their teeth" into learning. The individual, stimulated by radio, may in some cases do so. But he will be an exceptional individual.

On the other hand, the possibilities for learning which educational broadcasting already offers can not be so lightly dismissed as the above paragraphs might indicate. We have seen that the very character of radio imposes grave limitations. It also offers great advantages. The size of the audiences that can be reached is, of course, a tremendous asset. This makes educational broadcasting potentially, at least, very inexpensive. It also makes for quicker and more widespread results. In place of

<sup>4</sup> Cantril and Allport, *op. cit.* p. 255.

such advantages of schoolroom teaching as enforced attention and classroom discussion, the educator at the microphone has variety of form and interest appeal. He can employ drama and music easily, he can produce his own superior types of discussion. Perhaps the channeling of all appeal through the auditory senses sharpens and concentrates impressions. Furthermore, it tends to stimulate a supplementary activity, calling on the imagination to produce visual images. Finally, in network broadcasting, radio can offer a much more distinguished group of teachers and performers than the schools can afford to assemble or are physically able to gather together.

Because of these advantages, the curriculum of radio education is not so narrow as appears when it is considered literally. If most education by air is addressed to a hypothetical audience of high school level, many of its speakers, exhibits, and comments are precious to listeners with backgrounds of much greater culture. To hear even general remarks by outstanding professional authorities, by great artists and musicians, and by statesmen is an educational advantage from which the most highly educated can profit and one which offers a fine type of stimulus to relative beginners. The rendering of Shakespeare by outstanding actors or of the finest music by great conductors and the most skillful orchestras, the discussion of governmental problems by political leaders and of social problems by authorities in the field—such activity in education by air gives it a quality in certain of its aspects which is distinctly above its general technical level.

The inspirational impulse awakened by a fine interpretation of poetry or a significant social truth heard from the lips of an authority is often electric. A high school teacher told me that

boys in her classes who had shown an utter indifference to Keats were stirred in this fashion by hearing the Columbia Workshop's broadcast of "The Eve of St. Agnes." They re-read the poem with enthusiasm and went on voluntarily to study others by its author. Letters about many programs on government, science, biography, and music indicate that broadcasting constantly converts listeners into active seekers for knowledge. This capacity to supplement the work of the schools in raising the cultural level of the people has its definite value, even though what is accomplished may be difficult to assess.

Furthermore, for the relatively few diligent persons who are seeking to overcome educational disadvantages, radio offers unusual opportunities. A really persistent listener can find it a gateway to many accomplishments. He can not be carried by educational broadcasting from grammar school to college, but what he can get on the air will guide him in helping himself. He can be introduced to a subject by the words of outstanding authorities. Through printed material sent upon request he can obtain lists of books in public libraries and information about exhibits in museums. As he makes progress, he can often hear new broadcasts which will give him further stimulus and information. In music he can hear instructive examples of all types and can even study the playing of musical instruments. As adviser and inciter, the radio teacher thus has great possibilities. These should be developed carefully by better organization of courses and a more thorough use of printed materials to supplement the broadcasts.

Finally, we must not forget certain practical advantages already set forth which radio teaching possesses because of its technical nature. We have seen that it can carry information of a

timely character with unusual effectiveness. Information for farmers, for communities combatting disease, for citizens needing knowledge on public questions can be imparted over the air with a crisp informality and personal flavor that make it peculiarly effective. It is a different type of education from any we have had in the past. It is often limited and sporadic in character. Yet we must take account of its value. Much training in personal conduct will also have this character. The fact that it is informal and fragmentary must not blind us to the more important fact that it seems likely to bring definite results.

The character of educational radio is likely to improve. We can hope for a more comprehensive program in general, for fewer fragmentary presentations and more sustained courses, and for some service in the way of broadcasts to listeners who have been given introductory work and want further instruction. The trends of microphone teaching seem to be in these directions. Thus, it is not so important as it otherwise would be that we know little about the results of present teaching, for as the teaching alters in character the possibilities for learning will alter. At the same time, actual research in listener psychology and accomplishment will serve to determine ways for pushing future improvement. The studies that are under way are, accordingly, of great potential value. Out of a clear knowledge of limitations (and one can prophesy that they will reveal limitations that are great and in some directions appalling), we can climb steadily toward goals more positive in character and influence.

## Toward a Stronger Program

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How can we proceed with the making of that stronger program for education by air which most of those who know radio best—whether broadcasters or educators—concede to be desired and needful? What improvement could we effect if we had both vision and the determination to make it a reality?

Many Americans who want more and better things for education by radio think of improvement in terms of panaceas. They advocate some important surgical operation upon the system, such as the removal of advertising. The operation performed, the patient will get better. Improving radio is very simple!

But panaceas bring their own problems. Broadcasting systems in foreign countries that accept no advertising have had difficulties a-plenty. With our particular national temper and traditions, it has not seemed to the majority of those interested in radio—broadcasters, educators, and others—that we would gain by swapping the difficulties we now have for others we know little or nothing about. Moreover, we have decided not to make a trade for some time, if ever. We have given ourselves honestly to seeking salvation within the system we already have. So let us first ask what could be done to build a better structure under the essential form of control which we know and already use.

Certain facts with regard to existing educational activities on the air should be recognized before we talk of changes. We have already noted some of them.

One that has been implicit is this: that our broadcasting system, by its very looseness and effort to preserve initiative in many different quarters, is likely to take longer to mature than a more centralized and arbitrary one.

Another fact is that, despite any ills we have suffered either in regard to radio in general or education by radio in particular, we have seen a constant progress toward the knowledge necessary for developing a mature activity; toward technical proficiency in handling tools, whether mechanical or artistic or organizational; and finally, toward greater cooperation between groups with differing or conflicting attitudes. Moreover, the results in actual broadcasting have shown highly encouraging and often brilliant results. We are better off today than ever before and, while in some respects this says little, in others it says much. Were we sure of a further progress in all directions, there would be no reason to despair of building a satisfactory structure in educational broadcasting along the lines of our past endeavors.

Noting these facts, let us turn to a consideration of how we can continue our building profitably.

Possible improvements in our present educational broadcasting may be thought of as falling under five general heads. They are:

1. Improvement in administration or control.
2. Improvement in technical fields.
3. Improvement in the planning of broadcasting schedules.
4. Improvement in the content of broadcasting schedules.
5. Improvement in supplementary aids to radio.



### *Improvement in Administration or Control*

The question of administration takes us again to the Federal Communications Commission. We have already noted certain general questions of great importance that it must act upon, perhaps seeking additional powers from Congress to act effectively. These are: growth of the networks; joint ownership of newspapers and radio stations; and freedom of speech.<sup>1</sup> Just when the Commission will act or what it will do nobody can predict, but it is safe to say that there is strong public feeling that monopolistic tendencies should be checked and controlled, that speech over the radio should be made as free as possible (obviously there can be no such thing as complete freedom), and that public ownership and control over broadcasting frequencies must be fully maintained. The solution of such problems will be important for the general radio program and for education as a part of that program.

<sup>1</sup> Both network growth and acquisition of stations by newspapers involve the question of what an owner of a radio station can charge for his property and privileges if he wishes to sell them. Since it grants frequencies, the Commission has the power to approve sales. The vexatious point in a sale is "good will." Obviously, an owner can charge for his buildings and mechanical apparatus. But good will depends on the frequency, and this belongs to "the people." Can the owner charge for it, and how much? Columbia recently paid \$1,250,000 for Station KNX in Los Angeles—several times what the plant was worth. The F.C.C. sanctioned this payment, but former Commissioner Stewart has argued against this policy in a recent address, holding that by permitting a station to sell good will, the government might permit it to establish a property title to its frequency. The Commission's next action on an important sale is awaited with interest. The Commission's counsel, Hampson Gary, reported to Senator Wheeler of Montana last February, in answer to a request for information, that the F.C.C. had no power to prevent the sale of a station to a newspaper. Such power would have to be given by Congress, which, Mr. Gary believes, has the right to give it.

In its relationship to the actual broadcasting, the Commission should unquestionably take a less passive role than it has in the past. Its regulation of mechanical practices has been specific and thorough. With regard to what is broadcast it has kept as tentative an attitude as a cautious doctor watching a patient with a new disease. This may have been wise during the first ten formative years, but enough is now known about broadcasting to warrant definite measures, and inaction is becoming positively harmful.

One thing the Commission could and should do is to establish a better means for stations to describe the programs they have broadcast. For each six-month period all broadcasters are required to report on their work, but the forms on which they re-report tell relatively little about what they have done. Broadcasters are called upon to give the "average per cent of time per month" devoted to programs under the five categories, entertainment, educational, religious, agricultural, and fraternal, and to indicate the amount of sponsored and unsponsored time. It is a loose and relatively pointless method of reporting. The Commission could easily adopt a more detailed and useful classification. Most broadcasters and all educators would welcome it.

Such categories as the following might be employed: popular music, variety programs, serious drama, variety music, folk music, comedy, sport, classical music, semi-classical music, broadcasts to schools, adult education, news, religion, special features of public interest, international broadcasts, children's programs, farm programs, women's programs, and unclassified.<sup>2</sup> With regard to sponsored and sustaining programs, the Commission

<sup>2</sup> These headings, with a few changes, are those employed by Kenneth Bartlett of Syracuse University in his survey already noted on page 161.

should know (1) which ones are sponsored, (2) which of the sustaining programs are provided wholly by the station, and (3) which are provided by outside organizations, and in the latter case whether the station gave time only, or money and additional service. All educational programs also could be classified as to form—for example, talks and lectures, forums and discussions, informational-dramatic, and exhibitory (as of music played, poetry read, etc.).

Perhaps the Federal Radio Education Committee will submit information to the Commission that will embolden it to establish a new and more pertinent type of listing. Nor should the getting of fuller information on actual broadcasting be restricted to program-reporting alone. There is a strong sentiment to the effect that the Commission should regularly inform itself about all important aspects of broadcasting work. One Commission member in confidential conversation with the writer vigorously denounced the majority attitude which assumed that the F.R.E.C. constituted a complete fulfillment of the Commission's obligation with regard to education.

"I do not say that a joint cooperative effort by educators, broadcasters, and other qualified citizens to harmonize difficulties in the educational field is not useful," he said. "These gentlemen may learn much from each other and find ways of working together that will be most helpful. But when they suggest solutions to problems, what can we expect? Not a determination of a right course by an impartial body, but rather a series of compromises between prejudiced groups. The Commission in my opinion has shifted onto the shoulders of others a task it should face itself. It should make its own investigation of the educational problem and, once it has done so, keep itself informed as

to exactly what changes occur and how they are to be regarded from the point of view of the government and the public. How else will it get at the truth?"

This point of view is somewhat different from that of commercial broadcasters or of any group of educators. It suggests a logical method of informing and strengthening our supreme administrative authority, but it will probably need a Commission less susceptible to political and industrial influence than the present one. Numerous proposals in Congress to investigate the radio situation, and the appointment of several new members (one vacancy now exists by reason of the retirement of Commissioner Stewart, one of the best-informed and independent-minded members, and another because of the recent death of Chairman Anning S. Prall) may strengthen the Federal Communications Commission.

Granting that the Commission deals energetically and wisely with its duties as time passes, we shall then be faced with the question of the administrative practices of the broadcasters. These bring us to one of the most crucial aspects of the American system. The eventual success or failure of our educational activities as now conducted probably hinges upon the administrative policies of the men who manage our seven hundred stations.

I have already indicated the necessity for a policy of recognized responsibility in education on the part of networks and individual commercial stations. I have pointed out that if they are to have authority for it, they must accept it as their problem (cooperating as they can and will with educators). They must lay out procedures and carry these through in action. This matter of accepting responsibility is a psychological one. It means

the establishment of an attitude which, some broadcasters assert, already exists. I have tried to show that such an attitude has never been clearly articulated and unquestionably has not been carried into broadcasting practice. Certain suggestions which I shall now offer as natural consequences of responsibility will confirm the fact that full obligation has not been accepted by the industry.

For example, one specific result of a sincere attitude of responsibility and cooperation in my opinion should be a firm policy with regard to paying for educational programs and other nonprofit programs like them. In the past, as we have seen, the majority of educational radio activity has not been paid for at all. Educators have provided much of it free. Libraries and other institutions and organizations have furnished a considerable amount. That which has been paid for has been financed either by the industry or by the foundations. As a matter of fact, the Carnegie Corporation of New York has been the only philanthropic agency to finance experimental work with programs, although some grants made by the Rockefeller Foundation (e.g., to the University Broadcasting Council and to Station W1XAL) and the Payne Fund have been used in part to develop educational broadcasts. However, there is no sign that the foundations will go on paying indefinitely.

I have pointed out that if the broadcaster collects the money paid for radio in the United States, he should accept the obligation to maintain a full program, and from his profits pay whatever is necessary for the maintenance of this program. There will be an ethical question raised in cases where he is dealing with educational institutions and public organizations that get a certain amount of valuable publicity from the programs they

help him present. To a certain extent these organizations are in the position of sponsors. But even in such cases it is clear that they are not sponsors who may be compared with firms advertising products. They give more than they receive—if they give well. Therefore, an allotment of time should not represent the broadcaster's sole contribution in such cases. What should? It will vary with different types of cooperation, but a just minimum would seem to be an equal sharing of expense (which should include the paying of experienced performers). On the other hand, where the station makes an arrangement with an individual educator of reputation and ability, it should pay for his services as it would for those of an actor or musician.

I am well aware that the problem of payment would not be so simple as the above outline of procedure would indicate. Indeed, it would be highly vexatious and difficult were it to be attempted as an immediate and universal practice. Yet in the nature of the case it must be an objective to be approached gradually, and with common sense. There would be many instances where payment need not be made—as to beginners, for example. Nor do I believe that the broadcaster should pay educators whom he does not want at all, or representatives of groups with special purposes who do not really intend to do educational work or who do work that is obviously poor. One of the advantages of establishing payment as a general practice would be that the poorly qualified educator or pseudo-educator would soon drop out of competition. He is able to make a pest of himself at present because broadcasters are known to give away time, often to persons of mediocre abilities as speakers. But payment would tend to lift every sustaining program into the professional class, and give the station or network a just right to consider its quality

more carefully. The inept performer or the group merely wishing to "use" radio could not long stand up against highly competent and useful work.

In some cases such a general policy as I outline above has been followed. Librarians and teachers are sometimes paid by stations where the station's estimate of their skill and popularity is high. The stations in the University Broadcasting Council share expenses with the universities that are fellow members. But in many instances already cited, the responsibility is not shared, and the general policy is confusing. The argument, "I give valuable time; let them furnish the program," has often been carried into practice and has made for many poor programs. The station, the public, and the educator all suffer. Probably the station suffers most. It will be to the profit of commercial broadcasters to adopt a definite attitude on meeting costs and to work it out consistently in practice. This will not mean much change for some stations; and it will mean a definite gain in good will and program quality. Finally, broadcasters will assume no more responsibility than their authority and profits should justly put upon them.

Assuming that a policy of responsibility is adopted and that this entails financial commitments as well as good will, what about changes in the programs themselves?

This question opens up a number of problems. But before we turn to them in detail, let us remind ourselves of certain important considerations with regard to the programs as they already exist.

If we are to understand what is being done in educational broadcasting and pass intelligent judgment upon it, we must first do what many hostile critics of broadcasting have been

unwilling to do: *spend a large amount of time in actual listening*. Dozens of irate radio critics in the past have heard some offensive advertising and a few poor programs, and have then proceeded to assume that all broadcasting was like the samples they haphazardly had encountered. My own feeling has been that anyone wishing to criticize present practices should do them the honor of really becoming acquainted with them. I have had less time for listening than I could wish, but in six months of intensive work I have heard programs of many types, have followed the work of stations for hours at a time, have noted the choices offered listeners and the relationship of one program in a schedule to those preceding and following it. I have done this in various parts of the country. The result in my case has been a definite recognition that broadcasting practice as a whole is far better than one is likely to think from one's experience with unorganized listening.

Furthermore, I have become keenly aware of the fact, as have many others, that in the extensive researches undertaken in various aspects of broadcasting, research with the object of dispassionately describing the radio programs of various American communities has been startlingly neglected. Frequently there have been lists offered by networks and stations showing different percentages of the types of programs offered. There have been classifications made of such types for the programs of the entire country. There has been much eloquence expended on the basis of such classifications, none of which has used identical terminology, and none of which has represented *reporting based upon actual listening*. The only thorough effort thus far made to describe broadcasting service on the basis of listening plus intelligent classification has been the study



already referred to, made by Professor Kenneth Bartlett of Syracuse University for the city of Syracuse. And this has never been published!<sup>3</sup>

It will be profitable here to note certain facts about broadcasting in one community which Professor Bartlett's careful study reveals. Thanks to his kindness I am able to present these data.

I have already noted that this particular survey covered the work of three stations, each with a different network service (N.B.C. Red, 50,000 watts; N.B.C. Blue, 250 watts; and C.B.S., 5,000 watts daytime, 1,000 watts night time). The week chosen for analysis was one in February, 1935. The work of listening and reporting was done by 53 persons, who covered 372 hours of broadcasting time and described 1,080 programs. Care was taken in cases of doubt to check the character of certain programs and to harmonize differences of opinion as to the exact nature of what was offered. The programs were analyzed with many different questions in mind, and charts were carefully prepared to show visually what had been broadcast.

It is impossible to indicate in a few paragraphs all the important practices and trends which the study reveals. One important difference was between the sum total of what was *offered* and the actual service which a listener could *get*. For example, the three stations concerned might all be playing jazz or classical music at a certain time. In the sum total, the percentage of the type of program being produced would be increased by this fact. But the listener could hear only one of these three programs. What he could *get* would thus be one third of what was *offered*. Again, the predominant offerings for a three-hour

\* An account of Professor Bartlett's study will appear in the proceedings of the Institute for Education by Radio for 1937.

period might be in the character of light entertainment. But most of the time the listener nevertheless might be able to get cultural or educational broadcasts from one of the three stations. He could thus actually hear a large amount of a type of program which in terms of percentage was poorly represented.

Tests emphasized these possible differences between percentages and actual choices. As was noted in an earlier section, Professor Bartlett found that light entertainment occupied 60.4 per cent of the entire program time, serious entertainment 25.4 per cent, and features of special interest, 10.9 per cent. Actually, the listener had an opportunity to hear light entertainment 88.4 per cent of the time, serious entertainment 58 per cent of the time, and features of special interest 25.8 per cent of the time. In the evening hours the percentages were, respectively, 100, 50, and 1.8.

These statistics on the listener's *opportunities* show that our actual radio service is somewhat different from what we had supposed. In large city areas (New York, Chicago, Los Angeles, for example) one can be sure that the ability to hear any type of program at any time of the day or night would be considerably greater. Between the hours from 7:00 to 11:00 P.M. on the day when this section is in process of being written, listeners in New York can get good music or serious dramatizations or discussions of public interest 100 per cent of the time and can usually have at least three choices. This is not to say that all the selections offered are of high character (although many actually are), but the existence of extensive opportunities for listening to cultural and educational features is significant. Of course, New York probably affords the maximum of opportunity for listeners.

One could go further into Professor Bartlett's results and dis-

cover other aspects of actual practice, objectively described, which indicate that we are getting more from our broadcasting in the way of serious programs of good quality than we usually assume. I shall speak of certain encouraging and discouraging indications in his figures and descriptions later on. For the present, it is enough to note that we are somewhat closer to satisfactory effort and performance than we are inclined to think. This tallies with the broadcaster's frequent marshalling of fine things attempted and done. The reality of his positive accomplishments should not be forgotten.

However, we are primarily concerned here with the question of possible improvement. Let us proceed to consider certain further weak spots in present practice which can be improved by a change in the policies of commercial broadcasters.

There is the matter of "good" hours concerning which we have heard educators complaining. Is the broadcaster devoting enough of these hours to the finer types of programs?

The question is tortuously complicated. One must consider frankly what the bulk of the American radio audience wishes to hear. One must consider what intelligent minorities wish to hear. One must consider the problem of each station as an organization bound to maintain audiences for its programs if it is to sell time and support itself as a business enterprise. This question is also affected by others we shall consider—the variety and character of finer programs, the arrangement of programs in relation to each other, and so forth. A year's dispassionate canvass of the entire problem by a corps of investigators would give data enabling us to make a much more positive answer than can be given at present. The matter of assigning "good" hours to education is one in which broadcasters are justified

in saying that we must know more before we can act with full intelligence.

However, facts already available give some indication of what the situation is. Between the hours of 6:00 and 11:00 P.M. the Red and Blue networks of the N.B.C. and the Columbia networks usually give only from four to five hours of serious entertainment in the course of a week, exclusive of special features. Of this the majority is music, and the nonmusical broadcasts include some religious services, some talks sponsored by organizations, and programs like van Loon's and Woolcott's that are educational only to a mild degree. If one were to take programs broadcast during the week of May 23 to 29, 1937, for example, and shut out music and talking programs of questionable value as education, there would remain forty-five minutes of educational material from the Red network, an hour from the Blue, and seventy-five minutes from Columbia. (Winter weeks would show more. America's Town Meeting of the Air would be available then, for example.) Of this material, an hour was a spelling bee, a half hour might be termed "semi-news" (Education in the News and Science in the News, respectively), a half hour was general discussion. Perhaps the only incisively educational feature was the Office of Education's program Let Freedom Ring! I am not trying to dismiss as of no educational value such offerings as dramatic recitals, music and entertaining talks, reports of news in special fields, and such interesting discussions as the Hayden Planetarium's broadcast from Peru on preparations for studying the eclipse of the sun. They have definite value. But I am trying to indicate the small amount of time devoted in evening hours to any programs that are primarily concerned with teaching. During the week under discussion,

only two hours and a half of the time of all three networks was given to teaching programs in the period between 8:00 and 10:00 P.M.—fifty minutes per network per week. Again, much of the music was semipopular in character, showing a content that was predominantly entertainment. I should add that by "teaching" I do not mean to imply a lack of entertaining quality. The University of Chicago Round Table and the Science Service broadcast would be teaching programs, and both have high interest quality.

One should consider that in addition to the evening time given to such features, time was also given on Saturday and Sunday afternoons. One should consider special broadcasts of an informing nature. One should likewise consider that an overwhelming majority of the evening audience probably wants entertainment and is not interested in education at all. Furthermore, it is difficult as yet to develop educational features that have some solidity of matter and are so presented as to hold the interest of the audience.

Yet all this being recognized, one is forced to note the small amount of the best music and directly educational material presented by any of these three networks as regular evening features. And while opinions on quality would differ considerably, on the whole it would be recognized by honest broadcasters and educators alike that the programs of a consistently fine and serious nature are few. Weeks might pass, considering variations in the excellence of individual programs, when scarcely an hour of an intensive type of educational entertainment would be presented in night periods by any of the networks.

Should this be the case? Many broadcasters will say frankly, yes. They believe firmly that in these evening hours the inter-

est-character of a program must at all costs be high, and that at present much of the finest music or educational discussion or dramatization can not offer the "pulling" power evening broadcasts should have. Yet others will admit that what is offered is too thin, and that we should look for more material combining interest and solidity.

Personally, while recognizing the definite progress in program standards made in the last ten years, I should incline to think that any of these three networks (and this would be equally true of individual stations and the other national network) should as sound policy give more time in evening hours to classical music and educational programs on such subjects as social discussion, literature, biography, history, science, and psychology. In two of these six fields, in the week mentioned above, no programs were offered. In three others, but one program of a serious character was offered. This is meager fare for that minority of serious listeners that wants more than mere entertainment. This minority may be relatively small; the Columbia Workshop seems to draw an audience of about a half million from Jack Benny and other attractions at 7:00 P.M. on a Sunday evening; America's Town Meeting of the Air may never draw more than a few million listeners. The best of classical music would probably do no better. Yet these minorities comprise many of the more alert, sensitive, and well-educated Americans. And except with music, the broadcaster has not yet aimed above the heads of the majority often enough to be sure that his minority audiences will not grow as they get better programs to feed upon.

The actual amount of time that networks and stations should devote to educational broadcasts in evening hours can not be de-

terminated now, but I should say that a few hours a week of high quality educational broadcasting per network is not enough. To justify an increase, it would be necessary to provide better programs. Not enough effort has been spent in making serious programs as attractive as they could be. We shall come presently to this and to other aspects of broadcasting which affect these evening hours.

One aspect of the problem as far as the networks are concerned, is that of establishing and maintaining educational programs of scope and extended duration. Such programs would need to be part of a plan for comprehensive education—a matter which leads us back to the broadcaster's acceptance of a responsibility for the educational activity as a whole. This responsibility accepted, he should be engaged in the production of a number of programs—a few at least with evening hours—which run for periods of a year or more and represent a statesmanlike attack upon the problem of giving educational service. The NACRE programs, the Metropolitan Opera, the Damrosch hour, America's Town Meeting of the Air, the maintenance of great symphony offerings, and the American School of the Air fall within this category. The Office of Education programs also might possibly be so classified, although most of them were designed for relatively brief periods. Probably we shall need to experiment a great deal before we can find the type of instruction suited to radio which, maintained over long periods, will draw sufficiently large audiences to justify its existence. The broadcasters have not been unaware of the desirability of this type of broadcast, as many of their offerings show. But, as the NACRE experiments proved, they have not yet found the will or the means of attacking the educational program as a whole

with the cooperation of educators. They have been wary of the more solid type of offering that continues over a period of many months, or even years. Yet the creation of such educational courses will be a necessary part of the building of a satisfactory teaching service for the radio.

Another problem, the provision of network facilities for education comparable to those offered for commercial programs has already been pretty thoroughly discussed. Such provision will comprise (1) the offering of something like a full network, and (2) the maintenance of regular hours, once they are agreed upon. Here the broadcasters will need to cultivate cooperation in their own camp. For one network to solve the problem by negotiation with its stations may lead to a universal solution, but it is more probable that there must first be a common policy determined upon and supported by the three national chains. All member stations would then have like obligations. One difficulty at present is that insistence upon standards by one network might cause it to lose some of its stations to another not so strict. To educators this entire problem is probably the most vexing and serious among all those that arise in the process of cooperation with broadcasters. If we are to have a mature broadcasting structure, it must be dealt with effectively.

Despite the progress made in the treatment of advertising, the broadcaster still faces a problem in relating his sales methods to his efforts to serve "public interest."

In some instances the character of advertising (untruthful implications or assertions, extravagant phraseology, the nature of the product advertised, and the tempo of sales appeals) will have to be improved. The reduction in the number of "spot" advertisements is also important in the case of smaller stations



and so is the treatment of these "spots." At present they are sometimes piled up in offensive masses, or set between fine programs whose quality they impair. The "spot" is highly profitable, and many small stations can not do without it. But they can greatly improve its use so as to make it less offensive.

In the case of some stations, the sheer amount of advertising is still too great in proportion to the content of the program accompanying it. For networks, this is but partly true. Many advertisers do not take their full allotment of time, or when they do, they deal so tactfully with it that one can tolerate the general result. In other cases, the amount and manner of presentation of the advertising is far from satisfactory. Some broadcasts are of a type that makes the introduction of sales talk into the body of the program inoffensive; others are ruined by such treatment. In a number of programs, the frequent interruptions of the salesman are devastating in their effect upon the entertainment. Networks and stations alike are working upon this problem. It still needs their attention. Effective advertising in less time and with better art should be possible. In the early years of broadcasting it was actually realized. Advertising on many stations was brief, dignified, and wholly inoffensive. If brevity and good taste are no longer possible, then we face a difficulty which may yet result in drastic modification or change of the entire broadcasting structure. But the outlook is in the other direction. Some broadcasters go so far as to prophesy that eventually they will go further in reform than the practices of 1927. They hope, they say, to take program-making entirely out of the hands of advertisers and advertising agencies. Then they will announce their terms to the advertisers: "Here is our program. You may sponsor whatever feature you choose. You are subject to the following restrictions as to time and method."

This may be another radio Utopia, yet it is not inconceivable that a large part of the American system will eventually operate in this manner.

These, then, constitute some of the methods by which the broadcaster can improve the present radio program. But if he has obligations to meet and problems to solve in the march toward higher quality, so has the educator. The latter has no fixed authority in American radio, except as he manages educational stations, but he has demanded a voice in helping to shape an important part of the program, and he has been recognized as a factor in radio both by the Federal Communications Commission and the commercial stations. Like the owners of the stations, he must assume responsibility if he wants authority. He must find, as he is trying to find, something like a common philosophy for broadcasting and some kind of unity in action. He must face with the broadcaster such problems as the cost and creation of educational programs, the shaping of a comprehensive plan for the use of radio facilities. He must face the question of his own limitations, seeking to overcome them where he can, and admitting their existence where he can not. Until experimentation with the present system has succeeded or failed, he must be an active partner in it, whether his office is with the school or the college or with the public organization outside the formal educational system.

### *Improvement in Technical Fields*

Administration in radio is on the active frontier of broadcasting today; the development and use of technical apparatus is still in the pioneer stage also, but it may represent an important frontier tomorrow.

As we have seen, the most important single aspect of improve-

ment in *technical development* at present is the development of frequencies in the short and ultra-short-wave domain. This field may provide those broadcasting activities which are not of interest to the majority of the great radio audience, but which interest minorities, with supplementary facilities. The schools should profit from it. The broadcasting of quality programs may be assisted by the use of higher frequencies. Also on the horizon loom facsimile broadcasting and television, both pregnant with astonishing possibilities.

So far as the general radio program is concerned, the important point is that the needs of schools, colleges, and educational organizations should be anticipated as technical progress goes forward. In the present radio band we are unlikely to find much happening that will affect the future, but a definite policy of providing better facilities for educational stations, as they prove their capacity to use them, would be logical and helpful. The public has in these organizations a property which can be made of great value. The Commission is not unaware of this, but for the moment it can do little. Yet as it can, it should strengthen these stations with additional time and, if possible, better frequencies and more power.

### *Improvement in the Planning of Broadcasting Schedules*

Each American radio station makes its own program. To some extent this practice is modified by the network material received by 93 stations. But even considering this fact, the planning of eighteen hours of broadcasting activity is a complicated and difficult task. Most commercial as well as educational stations work hard at it. This activity has both a direct and an indirect importance for education.

In comparison with older standards, the smoothness and relative richness of a modern schedule is often a thing of beauty. Yet general practice shows certain important defects which can be modified or eliminated to the improvement of what the listener receives.

From the point of view of the educator, the arrangement of schedules still suffers from a failure to develop successfully a proper variety of educational work. This has been discussed. We are still weak in certain subjects, while fairly strong in others. Here both the networks and the individual stations have a task. This would include the development of certain relatively weak fields, such as science, literature, art, and psychology (the latter deficient not in quantity but in quality), the reduction or improvement of the broadcasts of "pressure" groups, and the building up of longer and more intensive courses of high interest quality.

In the creation of programs, many individual stations are particularly weak. They lean upon the networks when they should be developing features of their own and feeding the more outstanding of these into network schedules. Professor Bartlett in Syracuse found that evening time (7:00 to 11:00 P.M.) consisted of 84.5 per cent network programs. On the other hand, he discovered that local programs tended to imitate network practices and usually turned out poorer quality without offering originality. However, the work of many individual stations (in Boston, Chicago, Cincinnati, San Francisco, Detroit, Los Angeles, for instance) indicates that this need not be true.<sup>4</sup> Regional efforts like those in Chicago and Ohio and

<sup>4</sup> The N.B.C. networks in 1937 drew more than half of their features from the West. Of 1,471 programs, 627 originated in New York, 417 in Chicago,

the projected Rocky Mountain plan actually do, or should, promote local initiative and make for greater variety and distinction.

But in any case the individual station has a problem of program arrangement and often shows specific weaknesses in handling it. These include:

1. A failure to relate program materials to each other so as to avoid monotony. Example: four or five speaking programs in succession, when these could easily be broken with musical numbers.

2. A failure to avoid unpleasant contrasts. Example: a symphony program set between two sponsored programs of entertainment and advertising of a character designed to mar the effect of the music.

3. Excessive repetition of features, such as popular songs. In Syracuse, Professor Bartlett and his corps of listeners noted 56 renderings of one popular song, 54 of another, and 25 songs played more than ten times in the course of a week. This was for three stations, however, not for one.

4. An indiscriminating management of advertising material. This comprises to an extent the type of advertisement permitted, the character of assertions made, the excessive amount of time frequently used, and the annoying use of "spots."

Such defects in program-planning can be cured voluntarily by the stations themselves. Many stations have already cured them. But they can also be controlled from without to a degree. A better system of reporting programs to the Federal Communications Commission, and the mere knowledge that the Commission was interested in program-planning would quickly

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315 in San Francisco, and 112 in Hollywood. Many network stations like KOA (N.B.C., Denver) and KNX (C.B.S., Los Angeles) and WHAM (N.B.C., Rochester) create a substantial number of programs. A number of non-network stations like WCBM (Baltimore) also develop features locally. Colleges and educational groups are important contributors to local stations, as has been noted.

produce improvement. This phase of broadcasting practice, which often directly affects education by giving it a wretched setting, indicates the culpability of the Commission in blandly ignoring the character of the program as an aspect of "public interest, convenience, and necessity."

Program-planning has a community aspect also. This results from the various stations in a given area planning their programs independently, taking into consideration only the fact that they are in competition with each other. The result is often a practical duplication of programs by a number of stations at certain times.

Duplication tends to occur because of the very habits of the American listener. In the late afternoon and early evening he likes to hear the day's news. In the larger cities a number of stations provide practically the same material for him at the same time. In the mid-evening hours he is interested in entertainment. Often a number of broadcasters give him entertainment of a similar type. Later in the evening he wishes to dance; dance music is provided for him, and often all stations are giving him this and nothing else. In the daytime something similar tends to happen with housewives' programs, farm programs, and children's programs.

The evils of duplication were humorously but bitingly characterized in 1935 by a retired network official in an open letter addressed to the chairman of the new Federal Communications Commission and entitled, "Please, Mr. Ringmaster."<sup>8</sup> Picturing the radio activity of America as a three-ringed circus with "smaller platforms," the writer complained that "when one concessionaire stages an acrobatic act in his own ring, the peo-

<sup>8</sup> *Education on the Air . . . Radio and Education, 1935*, edited by Levering Tyson and Josephine MacLatchy. University of Chicago Press, p. 35.

ple who are running the other two rings . . . seem to think they have to give the customers the same thing at the same time. Speaking for myself, I have the three rings and two local platforms to choose from—five stations from which I get excellent reception, twelve months a year. But with all five stations insisting on putting on the same acts at the same time, I get a trifle dizzy.”

However, duplication is not so great as one would suppose when one considers that many hours are logically devoted to certain types of programs. Professor Bartlett, in his study of broadcasting heard in Syracuse, found that “exact duplication”—i.e., the broadcasting of three programs, such as children’s or agricultural or popular music offerings, took place but 10.7 per cent of the time. But he noted two other types of program similarity: “substantial,” as when two stations were playing popular music and a third a variety program with popular music in it; and “duplication of manner,” as when three speaking programs were offered at the same time. If these additional categories were considered, there was duplication in Syracuse 22.9 per cent of the time. At certain hours of the day and certain times of the week, the lack of choice for the listener was particularly marked. This was especially true of the hours from 8:00 to 10:00 in the morning; it was true of evening hours; there was considerable duplication in the dance period from 11:00 P.M. to 1:00 A.M., although not so much as was expected; while from Saturday evening at 7:30 until 1:00 o’clock the following morning, the listener had no choice in type of broadcast whatever for four hours and fifteen minutes!

The conditions in a city of modest size like Syracuse, of course, are not prevalent in metropolitan areas, but even here

the choices of the listener are often sharply curtailed by each station's being eager to give him what it thinks he wants at a certain time of day.<sup>9</sup>

An obvious remedy for such a situation exists in "staggering" the programs of the stations serving a certain area. Or, again, with cooperative planning, a deliberate variety might be achieved. I am unaware of any communities in which this has been attempted. The only definite efforts to avoid sameness which I have noted have been made by individual stations or networks who deliberately sought to catch the minority audiences who might not enjoy the particular type of entertainment which most stations might be giving at a particular time. There are always such minorities. It is not fantastic to imagine a situation in which they might be served by common agreement of the broadcasters of a locality, even by various stations taking turns! But, certainly, it would be feasible for stations to cooperate sufficiently to avoid many duplications by setting certain programs forward or back half an hour. A relatively slight effort would produce important results.

### *Improvement in the Content of Broadcasting Schedules*

Next to administrative procedure, no aspect of American broadcasting has been or is so important as the quality of the

<sup>9</sup> One of the most preposterous examples of penalizing the listener developed in July, 1937, when N.B.C. and C.B.S. both undertook Shakespearean broadcasts. For a month the two efforts were available (or rather both were *not* available) on successive Monday evenings, one from 9:00 to 10:00 P.M. and the other from 9:30 to 10:15 P.M.! While many considerations, including the saleability of time, doubtless promoted this conflict, one wonders if a few conversations with the object of making both programs available to the public might not have adjusted the days or hours so as to avoid this clash between two efforts to honor Shakespeare and serve lovers of good drama.



individual program. There is no phase of his task on which the broadcaster in the past has worked more diligently, or on which he is working harder today. Much of progress in entertainment and education by radio has stemmed from such activity. Building a good program appeals alike to the broadcaster wholly interested in making money and to the farther-seeing executive who also has a pride in radio as an art. Yet with a record of magnificent things accomplished, there remains much need for further progress.

How to attack the problem of content has already been indicated by the pioneers in radio art. Consequently, the problem is now chiefly one of raising poor practice to the level of the best.

A program develops through four potential stages. They are (1) conception, (2) script writing, (3) casting, and (4) rehearsal. A number of existing programs illustrate how successful broadcasts can be built.

In some cases, because of the nature of the program, the broadcaster can not cooperate closely in each successive stage. In the case of a lecture, his task is to choose or advise in choosing the subject and to pick the man who is likely to give a successful broadcast. Again, in a program like America's Town Meeting of the Air, the conception and title of the program series and of each separate program are highly important, and the staff (in this case a separate organization) selects the speakers and can take a leading part in outlining the program as a whole; the rest depends upon the speaker and the audience. On the other hand, in such a program as Let Freedom Ring, the Federal Radio Project and the Columbia Broadcasting System consulted with regard to the idea of the program, which was

highly important, employed able script writers to provide the text for each broadcast, and then rehearsed under the joint direction of Columbia and the officials of the Project. Great care was spent in developing this program, and comparable procedure was followed with such broadcasts as those of *The World Is Yours*, where N.B.C. was the broadcaster. In both cases advisory committees of educators aided in the preliminary planning and in the preparation of scripts.

Successful educational programs like these and the equally successful efforts of the University Broadcasting Council and Meredith Page's Workshop at Columbus, Ohio, have always been marked by labor of the highest professional character in each successive aspect of preparation. Where educational broadcasts have failed, they have usually been characterized by inattention or mishandling of one or more of these stages. Often the program is perfunctorily conceived: that is, imagination and study, such as a dramatic writer or a magazine editor would use in the selection of his material, have not been apparent; or the personnel associated with presentation has been badly chosen or ill-prepared; or the preparation of the script has been left in untrained or incompetent hands.

The remedies for these faults are obvious. First, the broadcaster must have workers who understand both education and the art of broadcasting; or he must put the creation of programs into the hands of some such organization as the University Broadcasting Council or the Federal Radio Project staff. If he creates the program himself, he must provide an adequate writer, such as an advertising agency would employ for sponsored programs. The Columbia Workshop has followed such a practice in seeking the services of men like Archibald MacLeish; so has

the Columbia staff with such programs as its Living Dramas of the Bible or Carl Carmer's American folklore broadcasts. Finally, the broadcaster must insist upon adequate rehearsal where this is necessary and must see that professional direction is given to the preparations for production.

This attention to quality in content means merely the will to work and the will to pay. All the resources are available. As they are used, we may find many of our difficulties with educational broadcasts dissipating like fog in a strong sun. Good quality in one program begets it in another. Perhaps our chief difficulty with education on the air has been that we have not done it well. Certainly, our outstanding successes indicate this. When we have used efficiently the resources we have in day-to-day broadcasting, we shall then be able to define more confidently the limitations of educational activity. One suspects that the limitations will break down, and the horizons of practicable accomplishment will extend before us as good work is attempted on a general scale instead of sporadically.

What of the smaller stations? Can they hope to do the intensive work demanded for programs of better content? In many cases, yes; they are already doing it. Many of the educational stations, with amateur groups of players and careful direction, are accomplishing admirable things. But where smaller stations lack facilities, they now have electrical transcriptions of excellent programs, both musical and speaking, increasingly available. They should and undoubtedly will use these increasingly. A good transcription is now practically as fine in technical quality as an actual broadcast, and the prejudice that once existed against the recorded program has all but vanished as far as audiences are concerned. The networks still lay an un-

necessary stress upon using "live" material, but there are signs that even they will in time modify their attitude.

### *Improvement in Supplementary Aids to Radio*

Finally, the program we might build in the future will take account of the limitations of the broadcast and use the devices already described to supplement it: advance publicity to gather the audience; printed matter to aid the listener in study; the library and the museum to act as cooperating agencies; and the listening group, whether registered or actually assembled, to serve the serious listener.

We are as yet only at the beginning of our study of these aids and our employment of them. In many cases, they can be utilized with small expense to the broadcasting station. Study aids can and should be sold at cost. The possibilities of the library and museum as aids to the listener can be explained in these printed materials, and again by the announcer in connection with the broadcasts. The program itself offers the best means for inviting registration of interested listeners. However, schools, colleges, and organizations can help with the formation of groups.

This completes the survey of possible ways in which we can work toward a stronger program for education by radio in America. Since the discussion has been long and somewhat complicated, let us sum it up in briefer form. This is what we can do:

1. Improve the administration of radio facilities affecting education by  
A firmer and better informed attitude on the part of the Federal Communications Commission. This would include an improvement in methods of reporting on station activities, the gathering by the Com-

mission of pertinent information on educational activities in general, and a solution of larger problems affecting education in such a manner that educational activities would not be impaired.

A reform and improvement of practices by commercial broadcasters, including

- An explicit acceptance of responsibility for education and the formation of a general but consistent policy toward it

- An acceptance, with just qualification, of financial responsibility for educational broadcasts

- The provision of more "good" hours for education

- The development of a larger number of programs of scope, continuity, and actual teaching value

- The provision of full network facilities for educational programs accepted by the networks

- The maintenance of fixed times for educational broadcasts

- Further improvement in advertising practices

- An improvement in cooperation by educators, through

- The achievement of some kind of a common philosophy with regard to educational broadcasting

- The achievement of some kind of unity of action, nationally and regionally

- The promotion of interest in radio by educators, especially higher educational officials, and the extension of training for radio activities among teachers and prospective teachers

2. Improve education through work in technical fields by

- Providing for education in such new radio areas as become available—short-wave, television, etc.

- Guarding the interests of publicly operated stations and improving the status of these as the work of the stations warrants it

3. Improve the planning of broadcasting schedules by

- Arranging programs for individual stations so as to avoid monotony or unpleasant contrast

- Handling advertising in a more intelligent manner

- Avoiding duplication through cooperative activity on the part of stations in separate communities

4. Improve the content of broadcasting schedules by
  - Energetic attention on the part of networks and larger stations to
    - Conceiving program ideas
    - Paying adequately for script writing
    - Giving attention to casting and selecting speakers
    - Giving attention to rehearsal and production
  - Similar action in so far as possible by smaller stations, with a more extensive use of fine transcriptions where resources are too limited for producing program quality by other means
5. Improve the use of supplementary aids to radio such as
  - Advance publicity
  - Libraries and museums
  - Printed materials sent before or after broadcasts
  - Listening groups

By following such a general plan, we can build a coherent and workable system for education by radio which will represent great improvement in comparison to the existing practice. Individual stations and networks have gone far toward realizing such a system in many respects. We have shown that there are all the resources for building it. We shall need courage, labor, and skill to carry the work through, but if we do not succeed in the attempt it will be because of inertness, disunity, and stupidity.

There still remains the question of what we can do if we fail. Failure may come because of the very "freedom" of the American system, with its wide distribution of power. The Federal Communications Commission may lack necessary firmness. Educators may be unable to give the service that they might render because of indifference, lack of unity, and a failure to adapt themselves to the radio. The broadcasters may prove to be the chief obstacle, by showing an incapacity to subordinate the

profit incentive sufficiently to public service. Should some or all of these difficulties prevent a solution, with our broadcasting system as it stands, we can, of course, modify the system.

If modification seems necessary, it will probably take the form of special provision for educational activity. This could be effected in a number of ways. It might be done by directing networks and stations to provide a certain number of hours (evening as well as daytime) to education.<sup>7</sup> It might be realized by the old proposal to set aside a certain percentage of frequencies for educational activity. Or it could be achieved by the gradual building up of an educational network which would span the entire country and comprise from fifteen to fifty stations devoting themselves chiefly to cultural and teaching work.

This takes us back to that part of our system which is already supported wholly or in part by public funds and is in the hands of public agencies, such as states, colleges, and educational societies. The thirty-eight stations which are so operated could, with more power and time, and wire connections, cover the Middle West and Northwest pretty thoroughly. These stations, together with those that are located in the South and Northeast

<sup>7</sup> Three bills introduced into the United States Senate July 8, 1937, by Senator Schwollenback of Washington, provide for the setting aside of time for public discussion and education by all radio stations and for the keeping of certain records by stations. These bills constitute the most intelligent proposal for regulating program activities that has yet been made in Congress. Their efforts to provide free discussion are wholly commendable. As to setting aside time for education and similar activities, they indicate a usable method which might be employed at once by the Commission or held in reserve until it is seen what can be accomplished by voluntary effort. The bill permits discretion as to how much time and what time should be set aside. A moderate regulation of this type would be welcomed by some broadcasters, according to statements made to the writer.

and a few additional centers strategically located, would make a chain sufficiently large with which to experiment. Funds might be provided in part by the Federal government (perhaps through a license tax on commercial broadcasters), and in part by such states as were sufficiently interested to help finance the service, or by the sale of a limited amount of time. Control could be vested in a government corporation, such as England and Canada have, or in a series of regional corporations that would send delegates to a general board that would take charge of certain national aspects of the undertaking but would leave the chief authority in each region to the corporation there.

The advantages of such a system incorporated with our present one might be many. It would leave general broadcasting in private hands, disturbing our present structure only to a small extent. It would take the more intensive educational activities out of the hands of commercial stations. However, it would give them both an obligation and a greater freedom to promote those educational and cultural broadcasts they have already shown a capacity to promote, which by their entertainment quality fit in well with the general character of privately operated radio. At the same time, the educational stations would be well financed, well staffed, and free to concentrate on establishing a service at once useful and proficient. They would feel the competition of private broadcasters and would have little tendency to produce dull programs. But they would be able to experiment with material and forms, to concentrate on quality in both musical and speaking programs, and to see what could be done to achieve actual teaching as well as broadcasts which would stimulate the listener to learn. They could employ supplementary aids as intensively as seemed needful, their listeners



could depend absolutely on the regularity and continuity of certain programs, and they could offer remuneration to performers, which would bring the best speakers, musicians (for music records could also be used freely), actors, writers, and directors to their studios. The whole undertaking would represent the extension and strengthening of the tax-supported facilities we already possess. It would, therefore, constitute the development of one of our present resources and not the imposition of a wholly new and untried practice. The success of educational stations like WHA indicates that with more money and an extensive organization, including the advantages of a network and the exchange of programs, such an experiment would be neither impracticable nor so difficult as might be imagined.

Nevertheless, it would require many adjustments, provoke considerable bitterness, and demand the development of activities which have thus far been local into well planned national broadcasting. It should, therefore, be considered, along with other possible changes, as something to be undertaken only if present methods of cooperation break down. And the present prospect, while uncertain, is surely one of success rather than of failure. Educators and broadcasters are closer together than they have been since the first days of broadcasting. Both show a desire to contribute toward a common end. With intelligence and good will and persistence they can solve the educational problem. If they do, we shall need no alternatives.

Of course, scientific developments may conceivably alter the entire face of the radio education problem. The short-wave area and television, still in the stages of incubation, may develop into creatures of such size and power that the small area

of middle-length waves which we now use will become dated and half forgotten. Some engineers foresee this as a possibility. Others laugh at it. Yet some engineers laughed also at the talking pictures and woke up to discover that these had taken possession of the movie world over night. Television may do the same with broadcasting. But whether it will or not is a question which at present rests in the hands of a dynamic future, which sits sphinxlike, giving us only riddles which we can not answer.



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